

TWR-63286

Final Test Report for the Qualification of the
Gritblast Assembly and Process for the Inside
Diameter of the RSRM Forward and Aft Domes

(NASA-CR-184462) QUALIFICATION OF
THE GRITBLAST ASSEMBLY AND PROCESS
FOR THE INSIDE DIAMETER OF THE RSRM
FORWARD AND AFT DOMES Final Test
Report (Thiokol Corp.) 39 p

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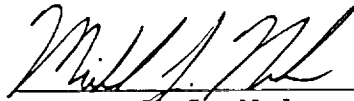
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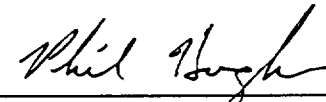
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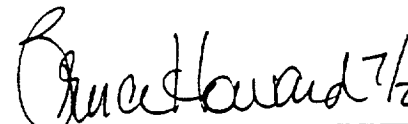
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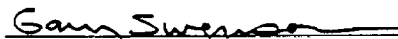
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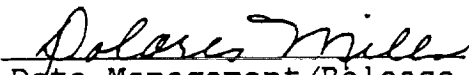
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1.0 INTRODUCTION

This document is the final test report for the qualification of the gritblast assembly and process for the Inside Diameter of the RSRM Forward and Aft domes. Testing was performed in accordance with Controlled Test Plan (CTP) 0311.

2.0 TEST OBJECTIVES

The objectives of this qualification test were to:

- A. Certify that the gritblast assembly maintains the surface exposure rate proven to produce an acceptable blasted surface on the ID of the forward and aft domes.
- B. Certify that the blast pressure is kept within the specified parameters.
- C. Certify that the gritblasting process will be accomplished using standards of workmanship which are consistent with the performance and reliability requirements.

2.1 PASS/FAIL CRITERIA

The following pass/fail criteria must have been met in order to have a successful qualification test.

- A. A surface exposure rate of between 32.3 surface ft/min to 45.2 surface ft/min. is maintained through the entire cycle.
- B. The blast pressure is maintained at 80 psi \pm 5 psi during the entire gritblast cycle. An excursion from this parameter while the blast tank is cycling is acceptable.
- C. Erosion from the new gritblast assembly shall be less than 0.207 mils per pass.
- D. The surface roughness of the ID of the forward dome shall be greater than 70 microinches R_a after completion of one gritblast cycle.
- E. The surface roughness of the ID of the aft dome shall be greater than 70 microinches R_a after completion of one gritblast cycle.

3.0 EXECUTIVE SUMMARY

3.1 SUMMARY

This gritblast assembly shall be used when refurbishing the Inside Diameter (ID) of RSRM forward and aft domes. Initial blasting is used to remove corrosion and adhesive not removed during the insulation washout. Final blasting is conducted just prior to part finalization in order to remove residual contamination and prepare the ID surface for bonding.

The media used in this gritblaster is DuPont Zirclean Blasting Abrasive. It is possible to use other media in this gritblast assembly, However the only facility that has the control capability for this assembly is the Zirclean blast booth. This blast booth can not use other media without the occurrence of contamination.

This automated process shall replace the manually controlled gritblasting that is currently in operation. Manual gritblasting does not provide the consistency, control, and safety that an automated process is capable of delivering.

3.2 CONCLUSIONS

<u>Test Objective</u>	<u>Conclusion</u>
A. Certify that the gritblast assembly maintains the surface exposure rate proven to produce an acceptable blasted surface on the ID of the forward and aft domes.	Certified. The surface exposure rate was kept within the parameters specified in the pass/fail criteria.
B. Certify that the blast pressure is kept within the specified parameters.	Certified. The blast pressure was kept within the parameters specified in the pass/fail criteria.
C. Certify that the gritblasting process will be accomplished using standards of workmanship which are consistent with the performance and reliability requirements.	Certified. Test results show that the automated gritblaster produces a better surface finish than the current manual gritblast method.

3.3 RECOMMENDATIONS

It is recommended that the gritblast assembly and process be qualified for refurbishment operations on the inside diameter of the RSRM forward and aft domes.

4.0 INSTRUMENTATION

The instrumentation that was needed for this qualification test is listed below:

<u>Instrument</u>	<u>Purpose</u>
DigiSolver E5N / Autotech Corp.	Measure the blast nozzle arm speed
DigiSolver E6N / Autotech Corp.	Measure the rotational speed of the table
Pressure Transducer / Omega Model: PX700-200G1 Range: 0-200 PSIG	Measure the blast system air pressure
Programmable Logic Controller 700 / Square D	Monitor the speed of the table rotation and the blast arm speed, compare actual values to the programmed set point, and adjust the signal to the variable speed DC electric motors to maintain the programmed set point
Surtronic-10 surface analyzer	Measure the surface roughness of the gritblasted surfaces. This instrument provides a microinch R_a surface roughness measurement within ± 3 microinch accuracy. Operating instructions are available in document No. DI-1012.
Mettler AE-160 electronic balance scale	This instrument shall be used to weigh all coupons before and after gritblasting. The weight loss is used to calculate erosion. This instrument has a weighing range of 0 to 160 grams, accurate to 0.1 milligrams.

5.0 PHOTOGRAPHY

Still photographs of the test items were taken just prior to the qualification test. Copies of the photographs (series no. 128687, 129073, and 129138) are available from the Thiokol Corporation Photographic Services Department.

6.0 TEST DESCRIPTION

Fifty bare metal D6AC steel coupons (2" x 2" x 0.25") were attached to the ID of the forward dome and fifty to the ID of the aft dome using black vacuum putty. These coupons were weighed before and after gritblasting to determine the erosion rate of the new gritblast assembly. The surface roughness of the dome surface adjacent to each coupon location was also measured before and after testing.

The non-flight domes used in this test (1U51633-06, 1U51633-05) were attached to a rotating table that is connected to the base of the gritblast assembly. This table is driven by a variable speed DC electric motor. At the center of the table is the blast nozzle arm that rotates about a plane that is oriented 90° from the plane of the rotating table. This blast arm is driven by variable speed DC electric motors. The programmable logic controller is used to control the speed of the rotating table and the blast nozzle arm so that a constant exposure (surface ft/min) to the blast is maintained.

After being rolled into the blast booth, the gritblast assembly was connected to the automated control system. One complete cycle was run for each dome without using any grit media (dry run). After the dry run verified the operation of the gritblast assembly, a complete cycle was run for each dome using the grit media. Operational parameters (blast pressure, rotational speed, etc.) were monitored every five seconds to ensure that the gritblast cycle was performing as intended.

7.0 RESULTS AND DISCUSSION

7.1 FORWARD DOME

All pass/fail criteria outlined for the forward dome in section 2.1 of the test plan (CTP-0311) were successfully accomplished.

The surface exposure rate for the forward dome blast cycle is shown in Figure 1. The figure indicates that the criteria for the surface exposure rate was violated at a nozzle position of approximately 106 inches. However this is not the case, it should be noted that at this location the table and nozzle speeds are increasing at such

a fast rate that the logic controller can not update the readouts quickly enough. The programmed rotational speed of 7 RPM (at the end of the cycle) was verified using a digital tachometer. The surface exposure rate was maintained within the 32.3 - 45.2 surface ft/min range during the entire gritblast cycle..

Table 1 shows the blast pressure in five second intervals during the forward dome gritblast cycle. The blast pressure did not deviate from the pressure range of 80 ± 5 psi specified in the test plan.

Analysis of the D6AC steel coupons after completion of the blast cycle showed that there was an average erosion rate of 0.167 mils/pass. This erosion rate is within the 0.207 mils of erosion per pass outlined in the pass/fail criteria.

Surface roughness for the dome surface adjacent to the coupons is listed in Table 2. The pass/fail criteria for post-test surface roughness values was successfully achieved. There were no dome surface locations that had a surface roughness less than 70 microinches R_a .

Photographs showing the pre-test and post-test condition of the forward dome are shown in figures 2 and 3.

7.2 AFT DOME

All pass/fail criteria outlined for the aft dome in section 2.1 of the test plan (CTP-0311) were successfully accomplished.

The surface exposure rate for the aft dome blast cycle is shown in Figure 4. The exposure rate was maintained within the 32.3 - 45.2 surface ft/min range specified in the pass/fail criteria.

Table 3 shows the blast pressure in five second intervals during the aft dome gritblast cycle. The blast pressure did not deviate from the pressure range of 80 ± 5 psi specified in the test plan.

Analysis of the D6AC steel coupons after completion of the blast cycle showed that there was an average erosion rate of 0.173 mils/pass. This erosion rate is within the 0.207 mils of erosion per pass outlined in the pass/fail criteria.

Surface roughness for the dome surface adjacent to the coupons is listed in Table 4. The pass/fail criteria for post-test surface roughness values was successfully achieved. There were no dome surface locations that had a surface roughness less than 70 microinches R_a .

Photographs showing the pre-test and post-test condition of the aft dome are shown in figures 4 and 5.

8.0 APPLICABLE DOCUMENTS

CTP-0311	Qualification of the Gritblast Assembly and Process for the Inside Diameter of the RSRM Forward and Aft domes
1U51633-05	Aft Dome
1U51633-06	Forward Dome
DI-1012	Operating Instructions for the Surtronic-10 surface analyzer

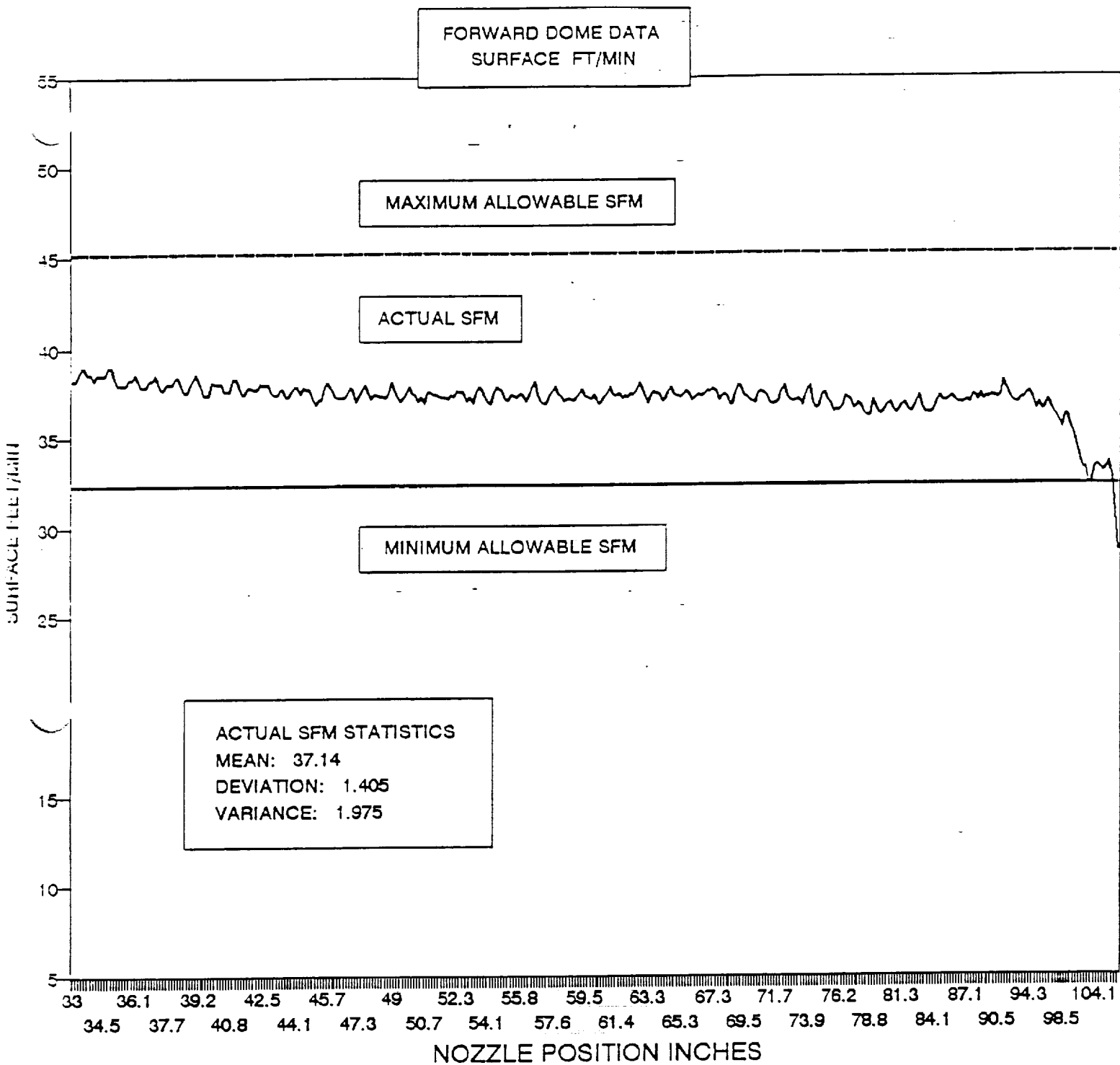


Figure 1. Gritblast Exposure Rate - Forward Dome

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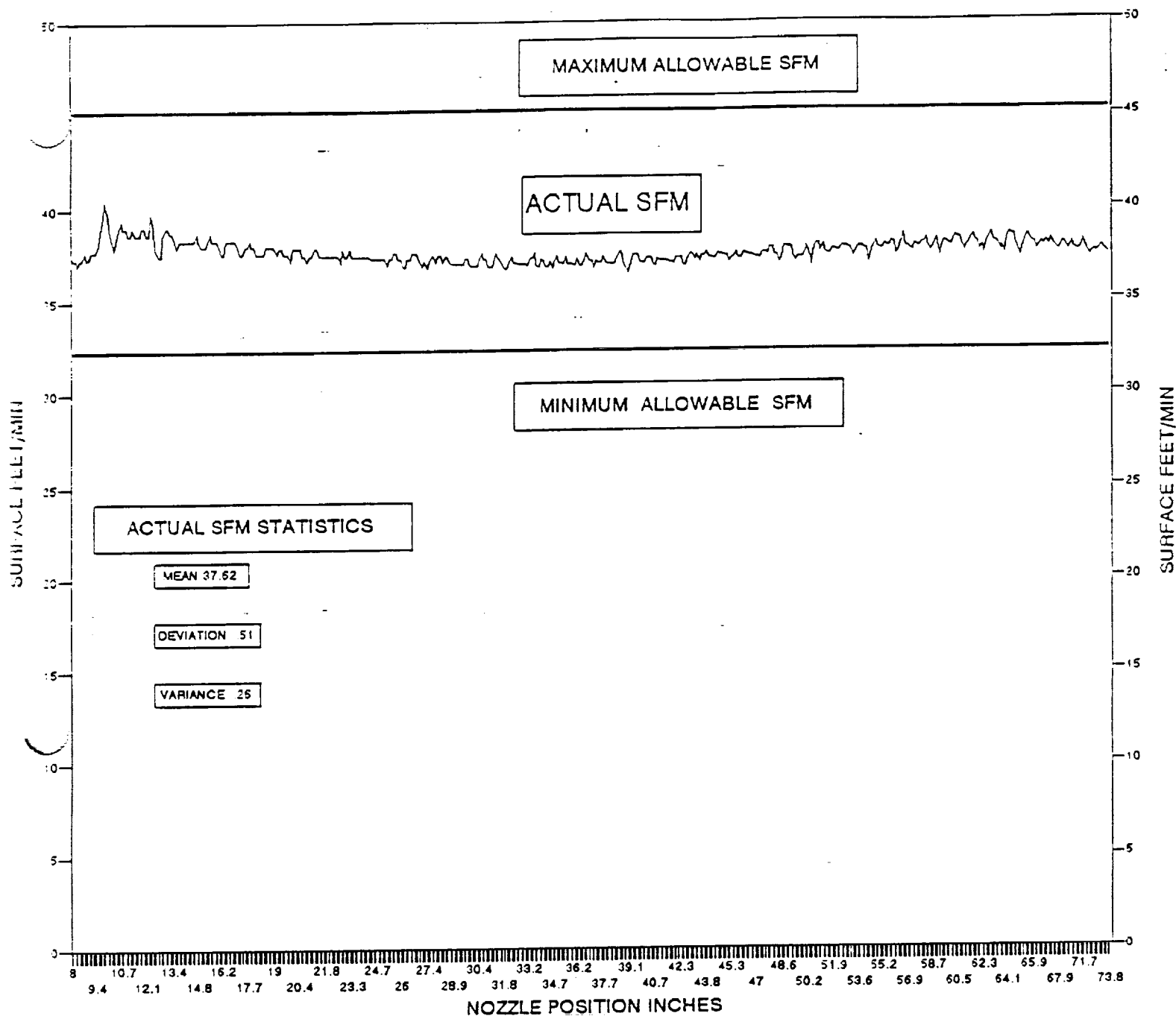


Figure 2. Gritblast Exposure Rate - Aft Dome

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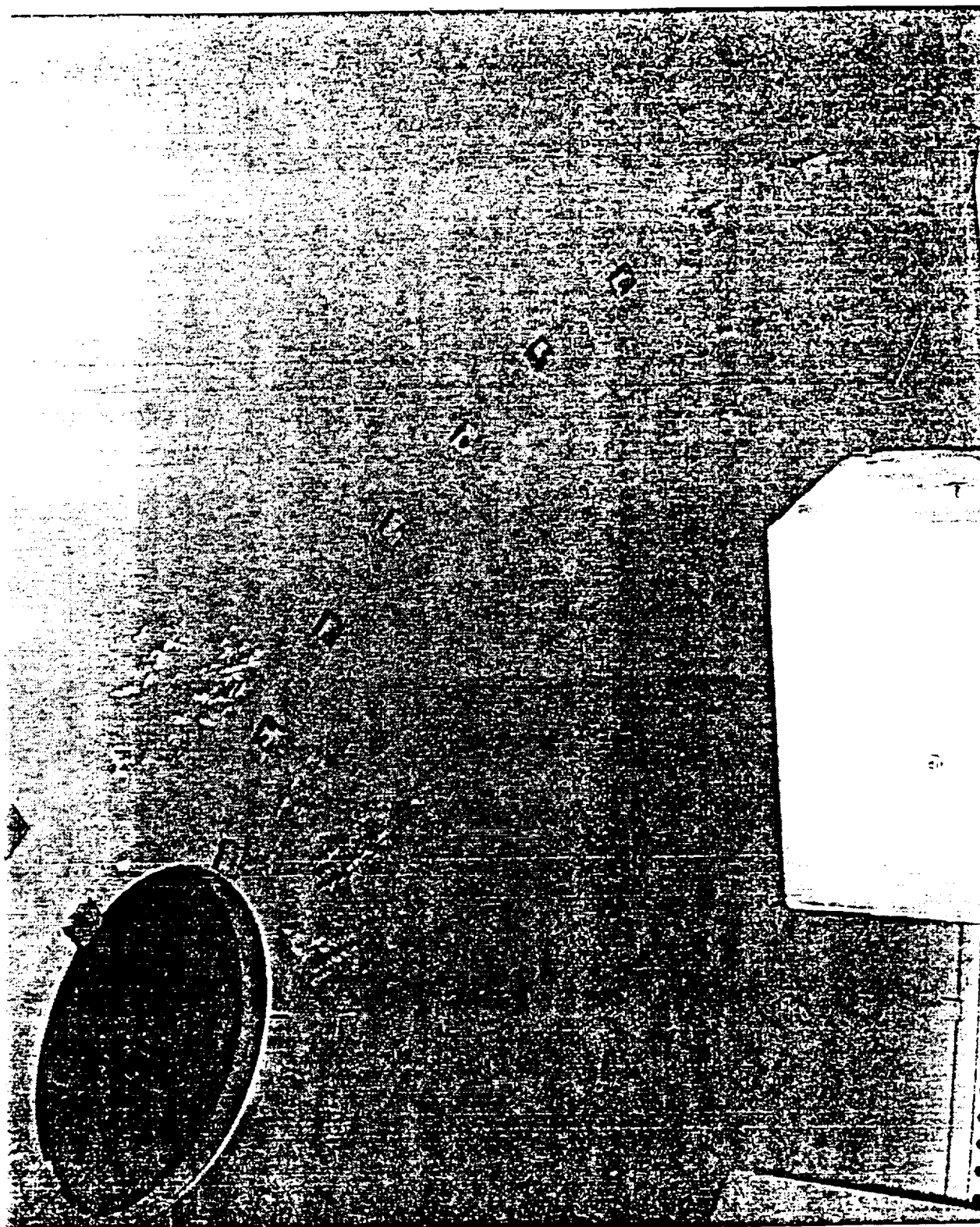


Figure 3. Forward Dome - Prior to Gritblast Cycle

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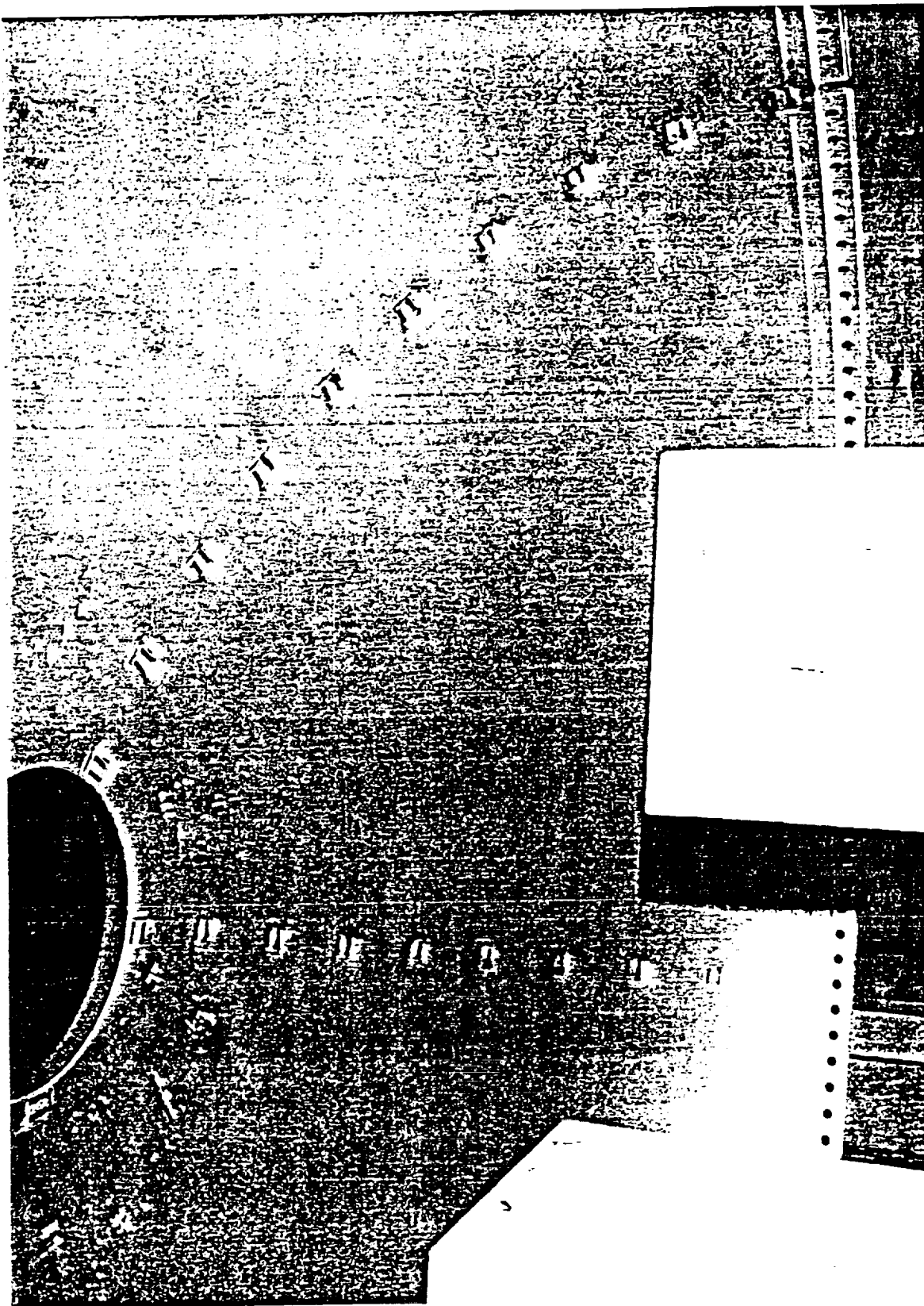


Figure 4. Forward Dome - After Completion of Gritblast Cycle

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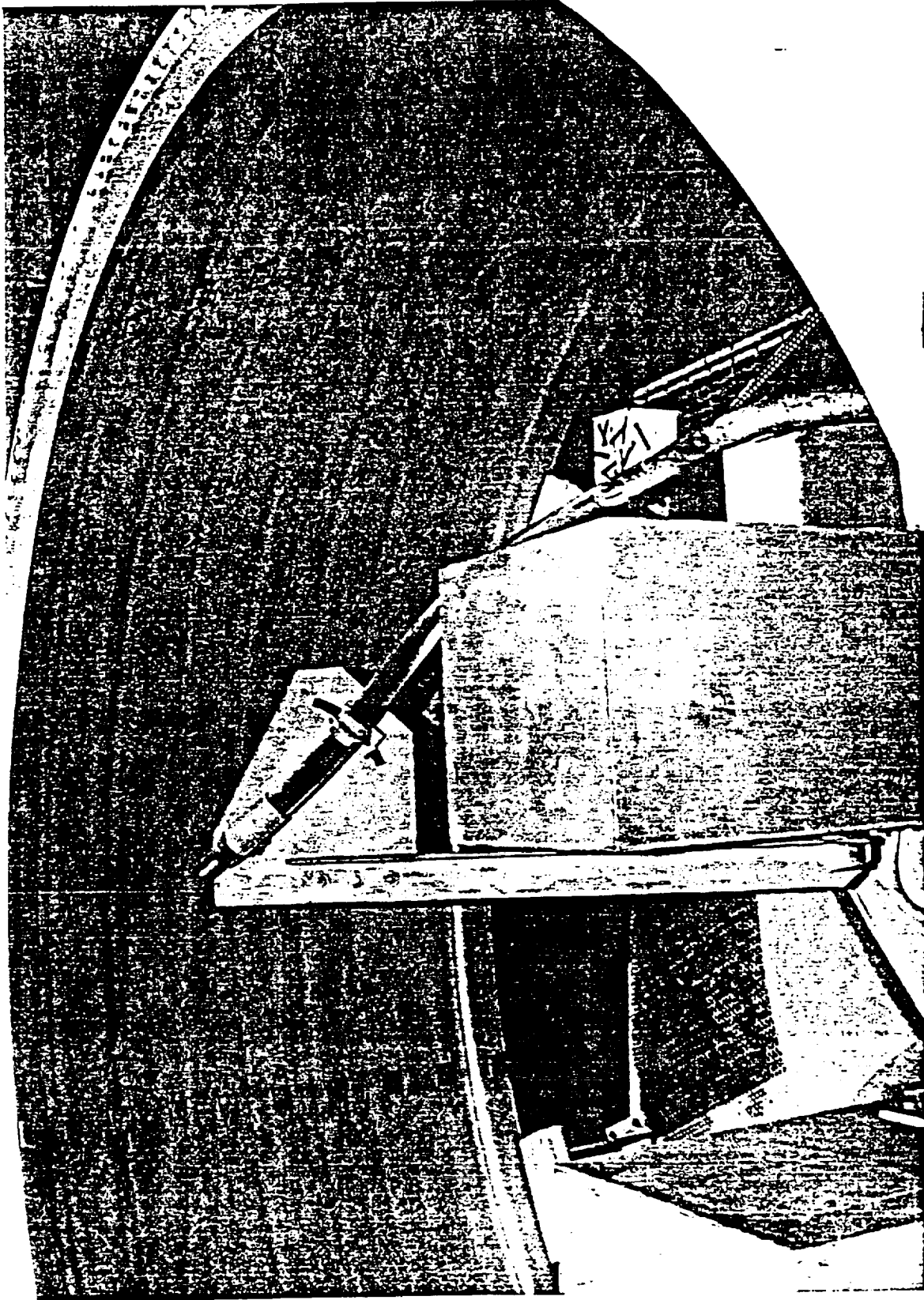


Figure 5. Aft Dome - Prior to Gritblast Cycle

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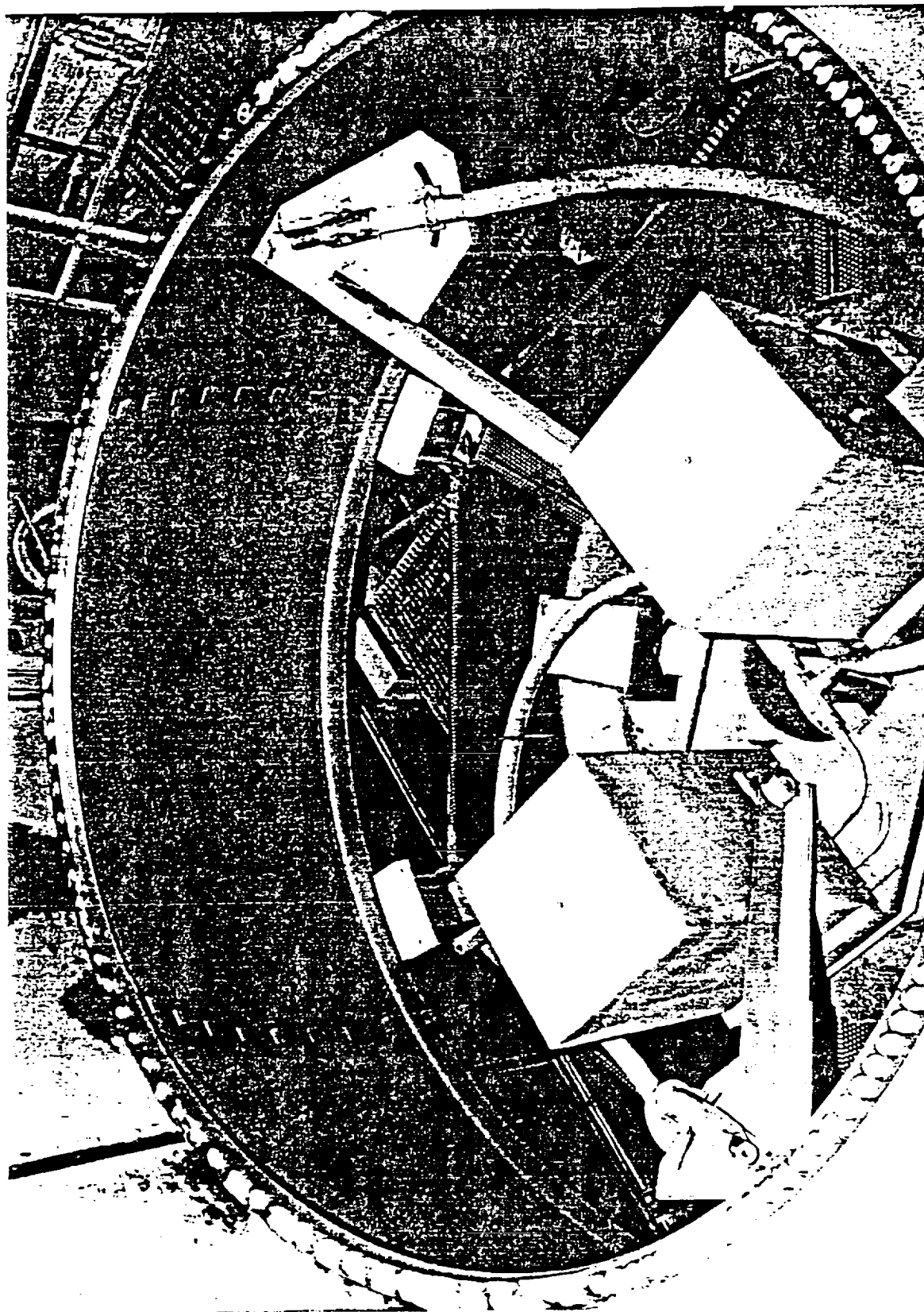


Figure 6. Aft Dome - After Completion of Gritblast Cycle

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Table 1. Erosion Data - Forward Dome

TP0311F

Table Erosion From Forward ID Dome Gritblast (Coupons P1 to P50)
Automated ID Dome Gritblast

No.	Before Blast Weight (grams)	After Blast Weight (grams)	Delta Weight (W1-W2) (grams)	Coupon Area (in ²)	Erosion (mils)	Table Degree Location	Row
P-001	134.2238	134.1476	0.0762	4.127	0.144	0	1
P-002	132.5912	132.4954	0.0958	4.079	0.183	0	2
P-003	131.2501	131.1506	0.0995	4.055	0.191	0	3
P-004	134.3278	134.2137	0.1141	4.131	0.215	0	4
P-005	132.6984	132.5891	0.1093	4.080	0.209	0	5
P-006	131.1672	131.0781	0.0891	4.156	0.167	0	6
P-007	128.4149	128.3152	0.0997	4.074	0.191	0	7
P-008	126.4988	126.4047	0.0941	4.002	0.183	0	8
P-009	118.8266	118.7346	0.0920	4.136	0.173	0	9
P-010	134.8087	134.7654	0.0433	4.063	0.083	0	10
P-011	134.3316	134.2423	0.0893	4.058	0.171	72	1
P-012	132.8206	132.7314	0.0892	4.125	0.168	72	2
P-013	131.6018	131.5004	0.1014	4.081	0.194	72	3
P-014	120.1780	120.0864	0.0916	4.159	0.172	72	4
P-015	119.2966	119.2140	0.0826	4.138	0.156	72	5
P-016	130.0505	129.9590	0.0915	4.011	0.178	72	6
P-017	120.6521	120.5546	0.0975	4.182	0.182	72	7
P-018	118.0196	117.9249	0.0947	4.090	0.180	72	8
P-019	132.6776	132.5860	0.0916	4.145	0.172	72	9
P-020	123.7077	123.6864	0.0213	4.100	0.040	72	10
P-021	124.0582	123.9729	0.0853	4.102	0.162	144	1
P-022	126.1348	126.0472	0.0876	4.160	0.164	144	2
P-023	138.1960	138.1080	0.0880	4.131	0.166	144	3
P-024	135.5615	135.4776	0.0839	4.039	0.162	144	4
P-025	131.0365	130.9383	0.0982	4.081	0.187	144	5
P-026	123.8292	123.7284	0.1008	4.092	0.192	144	6
P-027	124.4286	124.3342	0.0944	4.106	0.179	144	7
P-028	124.3597	124.2748	0.0849	4.094	0.162	144	8
P-029	131.5308	131.4491	0.0817	4.091	0.156	144	9
P-030	130.9090	130.8696	0.0394	4.074	0.075	144	10
P-031	121.0344	120.9599	0.0745	4.058	0.143	216	1
P-032	122.8523	122.7664	0.0859	4.096	0.163	216	2
P-033	121.8319	121.7487	0.0832	4.063	0.160	216	3
P-034	123.8828	123.7851	0.0977	4.097	0.186	216	4
P-035	124.4215	124.3201	0.1014	4.124	0.192	216	5
P-036	132.9033	132.8017	0.1016	4.149	0.191	216	6
P-037	130.2521	130.1543	0.0978	4.096	0.186	216	7
P-038	129.4729	129.3827	0.0902	4.070	0.173	216	8
P-039	128.2794	128.1860	0.0934	4.106	0.177	216	9
P-040	129.7340	129.6850	0.0490	4.143	0.092	216	10
P-041	138.6526	138.5709	0.0817	4.157	0.153	288	1
P-042	137.5741	137.4797	0.0944	4.127	0.178	288	2
P-043	131.6437	131.5497	0.0940	4.118	0.178	288	3
P-044	131.3785	131.2736	0.1049	4.114	0.199	288	4
P-045	118.0749	117.9721	0.1028	4.115	0.195	288	5
P-046	134.2823	134.1829	0.0994	4.055	0.191	288	6
P-047	134.9628	134.8554	0.1074	4.079	0.205	288	7
P-048	135.4314	135.3391	0.0923	4.100	0.175	288	8
P-049	132.6629	132.5677	0.0952	4.087	0.181	288	9
P-050	128.3062	128.2566	0.0496	4.077	0.095	288	10

Avg. Erosion : 0.167
Standard Deviation: 0.034
Maximum Coupon Erosion: 0.215
Minimum Coupon Erosion: 0.040

Average 0-Degree erosion: 0.174
Average 72-Degree erosion: 0.177
Average 144-Degree erosion: 0.176
Average 216-Degree erosion: 0.173
Average 288-Degree erosion: 0.171

Average Row 1 erosion: 0.155
Average Row 2 erosion: 0.171
Average Row 3 erosion: 0.178
Average Row 4 erosion: 0.187
Average Row 5 erosion: 0.188
Average Row 6 erosion: 0.184
Average Row 7 erosion: 0.188
Average Row 8 erosion: 0.175
Average Row 9 erosion: 0.172
Average Row 10 erosion: 0.077

Cycle Time: 31:29

Nozzle Standoff: 14.0 to 16.5 inches

Table 2. Surface Roughness Data - Forward Dome

CTP0311SRF

Table Surface Roughness Before and After Fwd Dome ID Gritblast (Dome Surface Adjacent To Coupons P1-P50)
Automated ID Dome Gritblast

No.	Surface Roughness(before) (Microinches Ra)					Surface Roughness (after) (Microinches Ra)					Degree Location	Test Date: 5/27/92
	H1	H2	V1	V2	Avg.	H1	H2	V1	V2	Avg.		
P-001	106	101	141	163	128	72	102	106	83	91	0	Before
P-002	119	96	123	113	113	91	113	112	115	108	0	
P-003	99	122	111	89	105	103	114	112	106	109	0	Avg. Roughness: 115
P-004	105	101	110	123	110	143	99	95	106	111	0	STD: 19.2
P-005	112	120	123	118	118	104	109	108	132	113	0	CV: 16.8
P-006	113	95	127	103	110	103	112	128	113	114	0	
P-007	119	110	109	128	117	92	90	90	113	96	0	Average 0-Degree Roughness: 117.550
P-008	114	115	119	109	114	98	113	127	130	117	0	Average 72-Degree Roughness: 114.333
P-009	100	104	118	117	110	103	91	121	86	100	0	Average 144-Degree Roughness: 115.275
P-010	128	138	173	168	152	119	108	103	130	115	0	Average 216-Degree Roughness: 113.550
												Average 288-Degree Roughness: 112.650
P-011	90	87	96	103	94	93	92	83	77	86	72	
P-012	107	111	131	117	117	83	104	118	105	103	72	Average Row 1 Roughness: 102.650
P-013	100	84	97	117	100	86	96	123	120	106	72	Average Row 2 Roughness: 113.100
P-014	91	90	120	102	101	125	75	108	100	102	72	Average Row 3 Roughness: 110.250
P-015	109	102	116	132	115	127	89	115	97	107	72	Average Row 4 Roughness: 108.550
P-016	121	130	107	113	118	94	95	134	97	105	72	Average Row 5 Roughness: 115.800
P-017	107	126	127	104	116	102	109	111	98	105	72	Average Row 6 Roughness: 109.200
P-018	102	120	129	106	114	100	105	101	106	103	72	Average Row 7 Roughness: 115.000
P-019	106	127	107	124	116	102	89	101	84	94	72	Average Row 8 Roughness: 115.500
P-020	109	140	185	164	150	118	117	161	176	143	72	Average Row 9 Roughness: 108.900
												Average Row 10 Roughness: 146.900
P-021	102	92	87	110	98	97	95	102	79	93	144	
P-022	110	118	108	123	115	91	110	88	95	96	144	
P-023	104	109	199	89	125	102	99	94	128	106	144	After
P-024	115	125	112	116	117	101	96	95	118	103	144	
P-025	125	101	103	123	113	96	92	148	107	111	144	Avg. Roughness: 107
P-026	88	85	125	102	100	105	103	99	118	106	144	STD: 19.4
P-027	102	120	124	128	119	114	121	92	125	113	144	CV: 18.2
P-028	123	107	131	137	125	113	111	98	108	108	144	
P-029	92	122	100	83	99	83	102	100	88	93	144	Average 0-Degree Roughness: 107.375
P-030	153	146	124	148	143	101	109	186	141	134	144	Average 72-Degree Roughness: 105.400
												Average 144-Degree Roughness: 106.250
P-031	107	106	106	80	100	82	86	96	72	84	216	Average 216-Degree Roughness: 104.875
P-032	119	109	112	116	114	118	78	98	107	100	216	Average 288-Degree Roughness: 109.200
P-033	112	114	127	108	115	95	85	94	94	92	216	
P-034	117	102	115	119	113	85	119	102	102	102	216	Average Row 1 Roughness: 89.350
P-035	105	86	146	123	115	111	96	101	105	103	216	Average Row 2 Roughness: 99.750
P-036	102	124	108	102	109	94	115	111	118	110	216	Average Row 3 Roughness: 103.800
P-037	99	102	127	105	108	97	105	101	116	105	216	Average Row 4 Roughness: 103.800
P-038	100	117	101	132	113	107	117	122	103	112	216	Average Row 5 Roughness: 107.600
P-039	100	99	107	110	104	109	109	118	96	108	216	Average Row 6 Roughness: 106.850
P-040	121	120	171	166	145	108	134	131	158	133	216	Average Row 7 Roughness: 103.850
												Average Row 8 Roughness: 111.300
P-041	98	87	94	97	94	98	79	85	108	93	288	Average Row 9 Roughness: 103.400
P-042	112	99	106	113	108	82	100	105	82	92	288	Average Row 10 Roughness: 136.500
P-043	114	112	90	108	106	102	126	100	97	106	288	
P-044	83	101	120	104	102	87	96	130	94	102	288	
P-045	114	103	125	130	118	106	96	88	125	104	288	
P-046	114	89	124	112	110	100	91	105	102	100	288	
P-047	93	122	145	103	116	100	103	87	111	100	288	
P-048	107	114	99	128	112	100	145	110	112	117	288	
P-049	136	117	99	110	116	111	131	117	127	122	288	
P-050	132	137	186	129	146	121	113	188	208	158	288	

Table 3. Gritblast Cycle Operating Parameters - Forward Dome

SAMPLE	DATE	TIME	TABLE	NOZZLE	NOZZLE	BLAST
			SPEED (RPM)	SPEED (IN/MIN)	POSITION (INCHES)	PRESSURE (PSI)
1	05/27/92	10:56:53	1.01	1.74	33	82.5
2	05/27/92	10:56:58	1.01	1.74	33.1	81.7
3	05/27/92	10:57:03	1.01	1.77	33.2	81.6
4	05/27/92	10:57:08	1.02	1.77	33.4	81.8
5	05/27/92	10:57:13	1.03	1.74	33.5	81.7
6	05/27/92	10:57:18	1.03	1.74	33.6	81.2
7	05/27/92	10:57:23	1.02	1.74	33.8	81.4
8	05/27/92	10:57:28	1.02	1.74	33.9	82
9	05/27/92	10:57:33	1.01	1.74	34.1	82.1
10	05/27/92	10:57:38	1.02	1.74	34.2	81.3
11	05/27/92	10:57:43	1.02	1.71	34.3	81.4
12	05/27/92	10:57:49	1.02	1.71	34.5	81.4
13	05/27/92	10:57:53	1.02	1.69	34.7	81.6
14	05/27/92	10:57:58	1.03	1.69	34.8	81.4
15	05/27/92	10:58:03	1.03	1.69	34.9	80
16	05/27/92	10:58:08	1.02	1.71	35.1	81.4
17	05/27/92	10:58:13	1.01	1.72	35.2	81.5
18	05/27/92	10:58:18	1.01	1.71	35.3	81.4
19	05/27/92	10:58:23	1.01	1.71	35.5	81.4
20	05/27/92	10:58:28	1.01	1.72	35.6	81.5
21	05/27/92	10:58:33	1.02	1.74	35.8	81.4
22	05/27/92	10:58:38	1.02	1.76	35.9	81.6
23	05/27/92	10:58:43	1.03	1.76	36.1	81.4
24	05/27/92	10:58:48	1.02	1.75	36.2	81.4
25	05/27/92	10:58:53	1.01	1.72	36.3	81.3
26	05/27/92	10:58:58	1.01	1.71	36.5	81.4
27	05/27/92	10:59:03	1.01	1.72	36.7	81.4
28	05/27/92	10:59:08	1.02	1.74	36.8	81.5
29	05/27/92	10:59:13	1.02	1.76	36.9	81.4
30	05/27/92	10:59:18	1.03	1.76	37.1	81.4
31	05/27/92	10:59:23	1.02	1.76	37.3	81.3
32	05/27/92	10:59:28	1.01	1.76	37.4	81.3
33	05/27/92	10:59:33	1.01	1.76	37.5	81.3
34	05/27/92	10:59:38	1.02	1.76	37.7	81.4
35	05/27/92	10:59:43	1.02	1.76	37.8	81.3
36	05/27/92	10:59:48	1.02	1.74	37.9	81.5
37	05/27/92	10:59:53	1.03	1.72	38.1	81.5
38	05/27/92	10:59:58	1.03	1.72	38.3	81.5
39	05/27/92	11:00:03	1.02	1.74	38.4	81.4
40	05/27/92	11:00:08	1.01	1.74	38.5	81.5
41	05/27/92	11:00:13	1.01	1.74	38.7	81.4

Table 3. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
42	05/27/92	11:00:18	1.02	1.74	38.8	81.3
43	05/27/92	11:00:23	1.03	1.74	39	81.4
44	05/27/92	11:00:28	1.04	1.74	39.1	81.4
45	05/27/92	11:00:33	1.03	1.75	39.2	81.5
46	05/27/92	11:00:38	1.02	1.77	39.4	81.5
47	05/27/92	11:00:43	1.01	1.76	39.6	81.4
48	05/27/92	11:00:48	1.01	1.75	39.7	81.4
49	05/27/92	11:00:53	1.01	1.74	39.8	81.3
50	05/27/92	11:00:58	1.03	1.71	40	81.4
51	05/27/92	11:01:03	1.03	1.7	40.1	81.5
52	05/27/92	11:01:08	1.03	1.71	40.2	81.4
53	05/27/92	11:01:13	1.03	1.72	40.4	81.4
54	05/27/92	11:01:18	1.02	1.74	40.6	81.4
55	05/27/92	11:01:23	1.02	1.76	40.7	81.4
56	05/27/92	11:01:28	1.02	1.75	40.8	82.4
57	05/27/92	11:01:33	1.04	1.75	41	81.2
58	05/27/92	11:01:38	1.04	1.75	41.1	81.4
59	05/27/92	11:01:43	1.03	1.75	41.3	81.5
60	05/27/92	11:01:48	1.02	1.74	41.4	81.5
61	05/27/92	11:01:53	1.02	1.76	41.6	81.4
62	05/27/92	11:01:58	1.03	1.76	41.7	81.4
63	05/27/92	11:02:03	1.03	1.75	41.9	81.4
64	05/27/92	11:02:08	1.03	1.76	42	81.5
65	05/27/92	11:02:13	1.03	1.74	42.1	81.5
66	05/27/92	11:02:18	1.04	1.76	42.3	81.4
67	05/27/92	11:02:23	1.04	1.76	42.5	81.3
68	05/27/92	11:02:28	1.04	1.76	42.6	81.3
69	05/27/92	11:02:33	1.04	1.76	42.7	81.3
70	05/27/92	11:02:38	1.03	1.76	42.9	81.3
71	05/27/92	11:02:43	1.03	1.75	43	81.4
72	05/27/92	11:02:48	1.03	1.76	43.2	81.3
73	05/27/92	11:02:53	1.04	1.78	43.3	81.5
74	05/27/92	11:02:58	1.04	1.8	43.5	81.3
75	05/27/92	11:03:03	1.03	1.82	43.7	81.4
76	05/27/92	11:03:08	1.03	1.84	43.8	81.5
77	05/27/92	11:03:13	1.04	1.83	43.9	81.2
78	05/27/92	11:03:18	1.05	1.8	44.1	81.4
79	05/27/92	11:03:23	1.05	1.77	44.2	81.3
80	05/27/92	11:03:28	1.04	1.76	44.3	81.5
81	05/27/92	11:03:33	1.05	1.75	44.5	81.3
82	05/27/92	11:03:38	1.05	1.76	44.6	81.4

Table 3. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
83	05/27/92	11:03:43	1.05	1.76	44.8	81.5
84	05/27/92	11:03:48	1.04	1.78	44.9	81.3
85	05/27/92	11:03:53	1.03	1.78	45.1	81.2
86	05/27/92	11:03:58	1.04	1.78	45.3	81.5
87	05/27/92	11:04:03	1.04	1.78	45.4	81.3
88	05/27/92	11:04:08	1.06	1.78	45.5	81.4
89	05/27/92	11:04:13	1.07	1.78	45.7	81.2
90	05/27/92	11:04:18	1.06	1.78	45.9	81.4
91	05/27/92	11:04:23	1.06	1.78	46	81.4
92	05/27/92	11:04:28	1.05	1.78	46.1	81.2
93	05/27/92	11:04:33	1.05	1.78	46.3	81.2
94	05/27/92	11:04:38	1.05	1.78	46.4	81.2
95	05/27/92	11:04:43	1.05	1.78	46.5	81.3
96	05/27/92	11:04:48	1.06	1.78	46.7	78.7
97	05/27/92	11:04:53	1.07	1.79	46.9	81.3
98	05/27/92	11:04:58	1.07	1.79	47	81.2
99	05/27/92	11:05:03	1.05	1.79	47.1	81.3
100	05/27/92	11:05:08	1.06	1.79	47.3	81.4
101	05/27/92	11:05:13	1.07	1.8	47.5	81.4
102	05/27/92	11:05:18	1.08	1.82	47.6	81.3
103	05/27/92	11:05:23	1.07	1.84	47.8	81.3
104	05/27/92	11:05:28	1.06	1.86	47.9	81.4
105	05/27/92	11:05:33	1.07	1.86	48.1	81.3
106	05/27/92	11:05:38	1.07	1.86	48.2	81.3
107	05/27/92	11:05:43	1.07	1.85	48.4	81.3
108	05/27/92	11:05:48	1.07	1.86	48.5	81.3
109	05/27/92	11:05:53	1.07	1.86	48.7	81.1
110	05/27/92	11:05:58	1.08	1.85	48.8	81.2
111	05/27/92	11:06:03	1.1	1.87	49	81.1
112	05/27/92	11:06:08	1.09	1.88	49.2	81.2
113	05/27/92	11:06:13	1.08	1.86	49.3	81.2
114	05/27/92	11:06:18	1.07	1.84	49.4	81.1
115	05/27/92	11:06:23	1.08	1.87	49.6	81.1
116	05/27/92	11:06:28	1.09	1.88	49.8	81.3
117	05/27/92	11:06:33	1.1	1.87	49.9	81.1
118	05/27/92	11:06:38	1.09	1.86	50.1	81.3
119	05/27/92	11:06:43	1.09	1.86	50.2	81.2
120	05/27/92	11:06:48	1.08	1.85	50.4	81.3
121	05/27/92	11:06:53	1.09	1.85	50.5	81.2
122	05/27/92	11:06:58	1.08	1.85	50.7	81.2
123	05/27/92	11:07:03	1.1	1.86	50.8	81.1

Table 3. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
124	05/27/92	11:07:08	1.1	1.85	50.9	81.1
125	05/27/92	11:07:13	1.1	1.85	51.1	81.1
126	05/27/92	11:07:18	1.1	1.85	51.3	81.1
127	05/27/92	11:07:23	1.1	1.85	51.4	81.4
128	05/27/92	11:07:28	1.1	1.86	51.6	81.1
129	05/27/92	11:07:33	1.1	1.86	51.7	81.1
130	05/27/92	11:07:38	1.1	1.85	51.9	81.1
131	05/27/92	11:07:43	1.11	1.86	52.1	81.1
132	05/27/92	11:07:48	1.11	1.86	52.2	81.1
133	05/27/92	11:07:53	1.12	1.86	52.3	81.1
134	05/27/92	11:07:58	1.12	1.86	52.5	81
135	05/27/92	11:08:03	1.12	1.86	52.6	81.2
136	05/27/92	11:08:08	1.11	1.89	52.8	81.1
137	05/27/92	11:08:13	1.11	1.92	53	80.9
138	05/27/92	11:08:18	1.12	1.92	53.1	81.1
139	05/27/92	11:08:23	1.11	1.92	53.3	81.1
140	05/27/92	11:08:28	1.13	1.93	53.4	81.2
141	05/27/92	11:08:33	1.14	1.94	53.6	81.2
142	05/27/92	11:08:38	1.14	1.94	53.8	81.3
143	05/27/92	11:08:43	1.13	1.95	53.9	81.3
144	05/27/92	11:08:48	1.12	1.95	54.1	81.2
145	05/27/92	11:08:53	1.12	1.96	54.2	81.3
146	05/27/92	11:08:58	1.14	1.95	54.4	81.3
147	05/27/92	11:09:03	1.15	1.94	54.5	81.2
148	05/27/92	11:09:08	1.15	1.95	54.7	81.3
149	05/27/92	11:09:13	1.15	1.96	54.9	81.2
150	05/27/92	11:09:18	1.14	1.96	55	81.1
151	05/27/92	11:09:23	1.14	1.94	55.2	81.2
152	05/27/92	11:09:28	1.15	1.95	55.3	81.2
153	05/27/92	11:09:33	1.15	1.96	55.5	81.1
154	05/27/92	11:09:38	1.15	1.96	55.7	81
155	05/27/92	11:09:43	1.16	1.96	55.8	81.1
156	05/27/92	11:09:48	1.16	1.96	56	81.2
157	05/27/92	11:09:53	1.15	1.96	56.1	81.1
158	05/27/92	11:09:58	1.16	1.96	56.3	81.1
159	05/27/92	11:10:03	1.18	1.96	56.4	81.1
160	05/27/92	11:10:08	1.19	1.96	56.6	81.1
161	05/27/92	11:10:13	1.17	1.96	56.8	81.1
162	05/27/92	11:10:18	1.16	1.96	56.9	81.1
163	05/27/92	11:10:23	1.16	1.96	57.1	81.1
164	05/27/92	11:10:28	1.16	1.96	57.2	81.1

Table 3. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
165	05/27/92	11:10:33	1.18	1.96	57.4	81.1
166	05/27/92	11:10:38	1.19	1.98	57.6	81.1
167	05/27/92	11:10:43	1.2	2	57.8	81.2
168	05/27/92	11:10:48	1.19	2.02	58	81.1
169	05/27/92	11:10:53	1.19	2.03	58.1	81
170	05/27/92	11:10:58	1.18	2.04	58.3	81.2
171	05/27/92	11:11:03	1.19	2.04	58.5	81.2
172	05/27/92	11:11:08	1.19	2.04	58.6	81.1
173	05/27/92	11:11:13	1.19	2.04	58.8	81.1
174	05/27/92	11:11:18	1.2	2.04	59	81
175	05/27/92	11:11:23	1.21	2.06	59.2	81.1
176	05/27/92	11:11:28	1.22	2.06	59.3	81.1
177	05/27/92	11:11:33	1.21	2.06	59.5	81.8
178	05/27/92	11:11:38	1.21	2.06	59.7	81.2
179	05/27/92	11:11:43	1.21	2.06	59.8	81.1
180	05/27/92	11:11:48	1.22	2.06	60	81.1
181	05/27/92	11:11:53	1.21	2.09	60.2	81.2
182	05/27/92	11:11:58	1.21	2.11	60.4	81.2
183	05/27/92	11:12:03	1.22	2.11	60.5	81.2
184	05/27/92	11:12:08	1.23	2.12	60.7	81.2
185	05/27/92	11:12:13	1.24	2.14	60.9	81.2
186	05/27/92	11:12:18	1.25	2.14	61.1	81.4
187	05/27/92	11:12:23	1.24	2.14	61.3	81.1
188	05/27/92	11:12:28	1.24	2.15	61.4	81.1
189	05/27/92	11:12:33	1.25	2.14	61.6	81.1
190	05/27/92	11:12:38	1.24	2.14	61.7	81
191	05/27/92	11:12:43	1.25	2.14	61.9	81
192	05/27/92	11:12:48	1.25	2.14	62.1	81
193	05/27/92	11:12:53	1.26	2.12	62.2	81
194	05/27/92	11:12:58	1.26	2.12	62.4	81.1
195	05/27/92	11:13:03	1.27	2.12	62.6	81.1
196	05/27/92	11:13:08	1.29	2.13	62.8	81.1
197	05/27/92	11:13:13	1.28	2.15	62.9	81.2
198	05/27/92	11:13:18	1.27	2.14	63.1	81.1
199	05/27/92	11:13:23	1.26	2.14	63.3	81.1
200	05/27/92	11:13:28	1.28	2.15	63.5	81.1
201	05/27/92	11:13:33	1.29	2.14	63.6	81.2
202	05/27/92	11:13:38	1.29	2.16	63.8	81.1
203	05/27/92	11:13:43	1.29	2.16	64	81.1
204	05/27/92	11:13:48	1.28	2.14	64.1	81.1
205	05/27/92	11:13:53	1.29	2.16	64.3	81

Table 3. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
206	05/27/92	11:13:58	1.31	2.16	64.5	81
207	05/27/92	11:14:03	1.32	2.14	64.7	81
208	05/27/92	11:14:08	1.31	2.17	64.9	81.1
209	05/27/92	11:14:13	1.31	2.18	65.1	81
210	05/27/92	11:14:18	1.31	2.2	65.3	81.1
211	05/27/92	11:14:23	1.32	2.22	65.5	81.2
212	05/27/92	11:14:28	1.33	2.24	65.6	81
213	05/27/92	11:14:33	1.33	2.26	65.8	80.9
214	05/27/92	11:14:38	1.32	2.26	66	81
215	05/27/92	11:14:43	1.33	2.26	66.2	81
216	05/27/92	11:14:48	1.34	2.26	66.4	81
217	05/27/92	11:14:53	1.34	2.28	66.6	81.1
218	05/27/92	11:14:58	1.35	2.28	66.8	79.4
219	05/27/92	11:15:03	1.36	2.29	67	81.2
220	05/27/92	11:15:08	1.36	2.29	67.1	81.1
221	05/27/92	11:15:13	1.37	2.29	67.3	81.2
222	05/27/92	11:15:18	1.37	2.29	67.5	81.3
223	05/27/92	11:15:23	1.36	2.29	67.8	81.3
224	05/27/92	11:15:28	1.37	2.36	67.9	81.2
225	05/27/92	11:15:33	1.38	2.42	68.2	81.1
226	05/27/92	11:15:38	1.38	2.43	68.4	81.2
227	05/27/92	11:15:43	1.37	2.42	68.6	81.1
228	05/27/92	11:15:48	1.37	2.4	68.7	81.1
229	05/27/92	11:15:53	1.4	2.38	68.9	81.1
230	05/27/92	11:15:58	1.42	2.36	69.1	81
231	05/27/92	11:16:03	1.42	2.35	69.2	81.1
232	05/27/92	11:16:08	1.41	2.34	69.5	81.1
233	05/27/92	11:16:13	1.41	2.34	69.7	81.1
234	05/27/92	11:16:18	1.41	2.34	69.9	81.1
235	05/27/92	11:16:23	1.41	2.35	70	81.1
236	05/27/92	11:16:28	1.41	2.34	70.2	81.2
237	05/27/92	11:16:33	1.44	2.34	70.5	81.2
238	05/27/92	11:16:38	1.45	2.36	70.7	81.1
239	05/27/92	11:16:43	1.45	2.39	70.8	81.1
240	05/27/92	11:16:48	1.45	2.41	71.1	81.1
241	05/27/92	11:16:53	1.44	2.41	71.3	81.2
242	05/27/92	11:16:58	1.44	2.42	71.4	81.1
243	05/27/92	11:17:03	1.45	2.45	71.7	81.1
244	05/27/92	11:17:08	1.46	2.48	71.9	81
245	05/27/92	11:17:13	1.48	2.49	72.1	81.1
246	05/27/92	11:17:18	1.5	2.52	72.3	81

Table 3. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
247	05/27/92	11:17:23	1.48	2.54	72.5	81.1
248	05/27/92	11:17:28	1.48	2.54	72.7	81
249	05/27/92	11:17:33	1.48	2.54	72.9	81
250	05/27/92	11:17:38	1.49	2.56	73.1	81
251	05/27/92	11:17:43	1.5	2.55	73.3	81.1
252	05/27/92	11:17:48	1.49	2.53	73.6	81.1
253	05/27/92	11:17:53	1.52	2.52	73.8	81.1
254	05/27/92	11:17:58	1.54	2.52	73.9	81.1
255	05/27/92	11:18:03	1.55	2.51	74.1	81.1
256	05/27/92	11:18:08	1.52	2.51	74.4	81.1
257	05/27/92	11:18:13	1.51	2.51	74.5	81
258	05/27/92	11:18:18	1.52	2.51	74.7	81
259	05/27/92	11:18:23	1.56	2.52	75	81.9
260	05/27/92	11:18:28	1.57	2.54	75.2	81.1
261	05/27/92	11:18:33	1.56	2.56	75.4	81.2
262	05/27/92	11:18:38	1.56	2.56	75.6	81.1
263	05/27/92	11:18:43	1.55	2.56	75.9	81.2
264	05/27/92	11:18:48	1.56	2.56	76.1	81.2
265	05/27/92	11:18:53	1.56	2.56	76.2	81.2
266	05/27/92	11:18:58	1.58	2.58	76.5	81.1
267	05/27/92	11:19:03	1.61	2.6	76.7	81.2
268	05/27/92	11:19:08	1.61	2.63	77	81.1
269	05/27/92	11:19:13	1.61	2.65	77.1	81.1
270	05/27/92	11:19:18	1.6	2.68	77.4	81.1
271	05/27/92	11:19:23	1.61	2.67	77.6	81
272	05/27/92	11:19:28	1.63	2.67	77.8	81.1
273	05/27/92	11:19:33	1.63	2.67	78	81
274	05/27/92	11:19:38	1.62	2.67	78.3	81.1
275	05/27/92	11:19:43	1.62	2.7	78.5	81.1
276	05/27/92	11:19:48	1.63	2.72	78.8	81
277	05/27/92	11:19:53	1.68	2.76	79	81
278	05/27/92	11:19:58	1.67	2.78	79.2	81.1
279	05/27/92	11:20:03	1.66	2.8	79.4	81.1
280	05/27/92	11:20:08	1.67	2.83	79.7	81
281	05/27/92	11:20:13	1.69	2.84	79.9	81.1
282	05/27/92	11:20:18	1.7	2.86	80.1	81.1
283	05/27/92	11:20:23	1.72	2.85	80.4	81.1
284	05/27/92	11:20:28	1.71	2.84	80.6	81.1
285	05/27/92	11:20:33	1.71	2.87	80.9	81.1
286	05/27/92	11:20:38	1.73	2.88	81.1	81.1
287	05/27/92	11:20:43	1.75	2.9	81.3	81.1

Table 3. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
288	05/27/92	11:20:48	1.77	2.93	81.6	81
289	05/27/92	11:20:53	1.76	2.94	81.8	81.1
290	05/27/92	11:20:58	1.76	2.96	82.1	81.1
291	05/27/92	11:21:03	1.78	2.98	82.3	81
292	05/27/92	11:21:08	1.81	2.99	82.5	81.1
293	05/27/92	11:21:13	1.84	3.01	82.8	81
294	05/27/92	11:21:18	1.82	3.04	83.1	81.1
295	05/27/92	11:21:23	1.82	3.06	83.4	81.1
296	05/27/92	11:21:28	1.83	3.08	83.6	81.1
297	05/27/92	11:21:33	1.84	3.08	83.8	81.1
298	05/27/92	11:21:38	1.86	3.08	84.1	81.1
299	05/27/92	11:21:43	1.9	3.13	84.4	79
300	05/27/92	11:21:48	1.92	3.15	84.6	81.1
301	05/27/92	11:21:53	1.92	3.18	84.9	81.1
302	05/27/92	11:21:58	1.93	3.2	85.2	81.1
303	05/27/92	11:22:03	1.95	3.2	85.4	81.2
304	05/27/92	11:22:08	1.97	3.21	85.7	81.2
305	05/27/92	11:22:13	1.98	3.24	86	81.1
306	05/27/92	11:22:18	1.99	3.3	86.3	81.1
307	05/27/92	11:22:23	2	3.31	86.5	81.1
308	05/27/92	11:22:28	2.02	3.34	86.8	81.1
309	05/27/92	11:22:33	2.04	3.39	87.1	81
310	05/27/92	11:22:38	2.05	3.43	87.4	81
311	05/27/92	11:22:43	2.09	3.47	87.7	81
312	05/27/92	11:22:48	2.11	3.5	88	81.1
313	05/27/92	11:22:53	2.11	3.52	88.3	81
314	05/27/92	11:22:58	2.15	3.54	88.6	81.1
315	05/27/92	11:23:03	2.15	3.58	88.9	81.1
316	05/27/92	11:23:08	2.17	3.59	89.2	81.1
317	05/27/92	11:23:13	2.19	3.6	89.5	81.1
318	05/27/92	11:23:18	2.22	3.66	89.8	81.1
319	05/27/92	11:23:23	2.23	3.73	90.2	81.1
320	05/27/92	11:23:28	2.25	3.79	90.5	81.1
321	05/27/92	11:23:33	2.27	3.83	90.7	81.1
322	05/27/92	11:23:38	2.35	3.87	91.1	81.1
323	05/27/92	11:23:43	2.35	3.88	91.4	81.1
324	05/27/92	11:23:48	2.36	3.89	91.8	81.1
325	05/27/92	11:23:53	2.37	3.91	92.2	81
326	05/27/92	11:23:58	2.38	3.96	92.4	81.1
327	05/27/92	11:24:03	2.42	4.02	92.8	81
328	05/27/92	11:24:08	2.47	4.09	93.2	81.1

Table 3. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
329	05/27/92	11:24:13	2.5	4.14	93.5	81.1
330	05/27/92	11:24:18	2.54	4.2	93.9	80.9
331	05/27/92	11:24:23	2.58	4.27	94.3	81
332	05/27/92	11:24:28	2.58	4.3	94.5	81.1
333	05/27/92	11:24:33	2.58	4.32	95	81
334	05/27/92	11:24:38	2.65	4.38	95.4	81.1
335	05/27/92	11:24:43	2.65	4.45	95.7	81.1
336	05/27/92	11:24:48	2.7	4.5	96.1	81.1
337	05/27/92	11:24:53	2.78	4.54	96.5	81
338	05/27/92	11:24:58	2.81	4.59	97	81.1
339	05/27/92	11:25:03	2.81	4.64	97.3	81.1
340	05/27/92	11:25:08	2.84	4.72	97.7	79.8
341	05/27/92	11:25:13	2.88	4.78	98.2	81
342	05/27/92	11:25:18	2.89	4.83	98.5	81.1
343	05/27/92	11:25:23	2.97	4.95	99	81.1
344	05/27/92	11:25:28	3.04	5.08	99.5	81.1
345	05/27/92	11:25:33	3.06	5.21	100	81.1
346	05/27/92	11:25:38	3.05	5.29	100.3	81.1
347	05/27/92	11:25:43	3.07	5.33	100.8	81.1
348	05/27/92	11:25:48	3.08	5.34	101.3	81.2
349	05/27/92	11:25:53	3.1	5.39	101.7	81.1
350	05/27/92	11:25:58	3.18	5.47	102.2	81.1
351	05/27/92	11:26:03	3.27	5.62	102.8	81.1
352	05/27/92	11:26:08	3.38	5.78	103.4	81.1
353	05/27/92	11:26:13	3.53	6.02	104.1	81
354	05/27/92	11:26:18	3.64	6.38	104.6	81.1
355	05/27/92	11:26:23	3.78	6.73	105.3	81
356	05/27/92	11:26:28	3.92	6.96	106	81.1
357	05/27/92	11:26:33	4.08	7.1	106.5	81
358	05/27/92	11:26:38	4.28	7.29	107.3	81
359	05/27/92	11:26:43	4.48	7.67	108.3	81
360	05/27/92	11:26:48	4.69	8.32	109.7	81
361	05/27/92	11:26:53	4.87	8.74	110.9	81.1

Table 4. Erosion Data - Aft Dome

CTP0311A

Table 4. Aft ID Dome Gritblast (Coupons P51 to P100)
Automated ID Dome Gritblast

No.	Before Blast Weight (grams)	After Blast Weight (grams)	Delta Weight (W1-W2) (grams)	Coupon Area (in ²)	Erosion (mils)	Table Degree Location	Row		
P-051	137.3280	137.2220	0.1060	4.221	0.196	0	1	Avg. Erosion :	0.173
P-052	135.5398	135.4415	0.0983	4.177	0.183	0	2	Standard Deviation:	0.023
P-053	133.7092	133.6114	0.0978	4.113	0.185	0	3	Maximum Coupon Erosion:	0.224
P-054	136.3374	136.2449	0.0925	4.111	0.175	0	4	Minimum Coupon Erosion:	0.135
P-055	132.1951	132.1008	0.0943	4.096	0.179	0	5		
P-056	117.9858	117.8984	0.0874	4.093	0.166	0	6		
P-057	135.2612	135.1809	0.0803	4.197	0.149	0	7		
P-058	131.9897	131.9091	0.0806	4.099	0.153	0	8		
P-059	133.2804	133.2082	0.0722	4.100	0.137	0	9	Average 0-Degree erosion:	0.167
P-060	135.5250	135.4485	0.0765	4.171	0.143	0	10	Average 72-Degree erosion:	0.177
								Average 144-Degree erosion:	0.179
P-061	132.7016	132.5830	0.1186	4.123	0.224	72	1	Average 216-Degree erosion:	0.176
P-062	132.3246	132.2173	0.1073	4.111	0.203	72	2	Average 288-Degree erosion:	0.165
P-063	136.4032	136.3024	0.1008	4.111	0.191	72	3		
P-064	126.5150	126.4095	0.1055	4.170	0.197	72	4	Average Row 1 erosion:	0.197
P-065	135.9721	135.8767	0.0954	4.213	0.176	72	5	Average Row 2 erosion:	0.196
P-066	133.7783	133.6850	0.0933	4.149	0.175	72	6	Average Row 3 erosion:	0.186
P-067	131.8777	131.8007	0.0770	4.074	0.147	72	7	Average Row 4 erosion:	0.188
P-068	128.4359	128.3654	0.0705	4.080	0.135	72	8	Average Row 5 erosion:	0.189
P-069	135.7847	135.6905	0.0942	4.196	0.175	72	9	Average Row 6 erosion:	0.173
P-070	136.0779	135.9978	0.0801	4.203	0.148	72	10	Average Row 7 erosion:	0.153
								Average Row 8 erosion:	0.147
P-071	124.4668	124.3577	0.1091	4.101	0.207	144	1	Average Row 9 erosion:	0.153
P-072	125.1380	125.0310	0.1070	4.120	0.202	144	2	Average Row 10 erosion:	0.146
P-073	129.5885	129.4872	0.1013	4.123	0.191	144	3		
P-074	133.6401	133.5355	0.1046	4.039	0.202	144	4		
P-075	136.9568	136.8470	0.1098	4.098	0.209	144	5	Cycle Time:	37:10
P-076	137.8172	137.7263	0.0909	4.129	0.172	144	6		
P-077	126.4237	126.3472	0.0765	4.166	0.143	144	7	Nozzle Standoff:	14.0 to 14.7 Inches
P-078	136.7804	136.6992	0.0812	4.123	0.153	144	8		
P-079	129.1984	129.1127	0.0857	4.103	0.163	144	9		
P-080	119.1513	119.0711	0.0802	4.149	0.151	144	10		
P-081	133.7923	133.695	0.0973	4.123	0.184	216	1		
P-082	140.1666	140.0571	0.1095	4.111	0.207	216	2		
P-083	119.6047	119.5035	0.1012	4.111	0.192	216	3		
P-084	124.7332	124.6418	0.0914	4.170	0.171	216	4		
P-085	135.7869	135.6776	0.1093	4.213	0.202	216	5		
P-086	127.3364	127.2347	0.1017	4.149	0.191	216	6		
P-087	127.2290	127.1401	0.0889	4.074	0.170	216	7		
P-088	133.8914	133.8157	0.0757	4.080	0.145	216	8		
P-089	131.4476	131.3684	0.0792	4.196	0.147	216	9		
P-090	129.9601	129.8789	0.0812	4.203	0.151	216	10		
P-091	124.7951	124.7025	0.0926	4.101	0.176	288	1		
P-092	125.3881	125.2903	0.0978	4.120	0.185	288	2		
P-093	138.6615	138.5712	0.0903	4.123	0.171	288	3		
P-094	139.2788	139.1767	0.1021	4.039	0.197	288	4		
P-095	139.9316	139.8383	0.0933	4.098	0.177	288	5		
P-096	131.7612	131.6752	0.0860	4.129	0.162	288	6		
P-097	133.5385	133.4540	0.0845	4.166	0.158	288	7		
P-098	131.2092	131.1307	0.0785	4.123	0.148	288	8		
P-099	136.8393	136.7644	0.0749	4.103	0.142	288	9		
P-100	104.4728	104.4005	0.0723	4.149	0.136	288	10		

Table 5. Surface Roughness Data - Aft Dome

CTP0311SRA

Table 5. Surface Roughness Before and After Aft Dome ID Gritblast (Dome Surface Adjacent To Coupons P51-P100)
Automated ID Dome Gritblast

No.	Surface Roughness(before) (Microinches Ra)					Surface Roughness (after) (Microinches Ra)					Degree Location	Test Date: 5/5/92
	H1	H2	V1	V2	Avg.	H1	H2	V1	V2	Avg.		
P-051	134	111	105	113	116	97	91	84	105	94	0	Before
P-052	135	130	102	101	117	109	115	114	106	111	0	
P-053	96	124	95	104	105	97	117	107	106	107	0	
P-054	109	109	105	107	108	101	115	98	111	106	0	
P-055	84	128	98	119	107	97	101	96	103	99	0	
P-056	125	102	102	96	106	97	98	137	103	109	0	
P-057	107	112	104	105	107	96	92	100	111	100	0	
P-058	126	105	98	105	109	93	106	85	98	96	0	
P-059	87	148	91	78	101	91	99	102	104	99	0	
P-060	90	120	133	110	113	106	110	153	151	130	0	
P-061	108	131	87	96	106	86	94	100	91	93	72	Average 0-Degree Roughness: 108.825 Average 72-Degree Roughness: 106.778 Average 144-Degree Roughness: 109.725 Average 216-Degree Roughness: 104.650 Average 288-Degree Roughness: 106.575
P-062	167	111	92	83	113	113	91	113	120	109	72	
P-063	145	118	95	119	119	92	106	98	86	96	72	
P-064	124	121	85	100	108	114	97	107	111	107	72	
P-065	95	114	99	115	106	99	89	100	113	100	72	
P-066	90	103	118	113	106	91	103	104	91	97	72	
P-067	111	90	122	111	109	87	104	100	99	98	72	
P-068	90	103	105	128	107	100	89	100	97	97	72	
P-069	103	103	102	99	102	97	103	110	109	105	72	
P-070	113	120	121	132	122	99	95	160	160	129	72	
P-071	139	125	253	255	193	83	113	101	89	97	144	After
P-072	122	103	103	94	106	97	98	84	114	98	144	
P-073	117	96	101	109	106	105	107	103	116	108	144	
P-074	126	111	100	93	108	100	126	114	100	110	144	
P-075	98	106	87	94	96	88	97	91	103	95	144	
P-076	98	85	99	100	96	84	102	88	88	91	144	
P-077	97	91	92	63	86	94	111	102	99	102	144	
P-078	97	77	119	94	97	109	93	97	108	102	144	
P-079	99	98	93	93	96	106	105	92	90	98	144	
P-080	98	105	132	127	116	97	107	206	170	145	144	
P-081	107	89	104	93	98	105	91	102	79	94	216	Average 0-Degree Roughness: 105.050 Average 72-Degree Roughness: 102.950 Average 144-Degree Roughness: 104.425 Average 216-Degree Roughness: 100.675 Average 288-Degree Roughness: 101.225
P-082	117	134	122	105	120	111	96	101	103	103	216	
P-083	104	113	111	93	105	90	84	92	91	89	216	
P-084	98	118	107	97	105	103	95	82	93	93	216	
P-085	128	97	109	102	109	104	112	97	87	100	216	
P-086	94	105	106	94	100	103	135	97	93	107	216	
P-087	88	82	112	91	93	82	93	100	103	95	216	
P-088	101	90	94	115	100	102	89	105	106	101	216	
P-089	112	99	94	122	107	105	96	107	98	102	216	
P-090	86	107	120	126	110	122	106	137	130	124	216	
P-091	98	100	105	83	97	102	108	95	87	98	288	Average Row 1 Roughness: 95.150 Average Row 2 Roughness: 103.150 Average Row 3 Roughness: 98.850 Average Row 4 Roughness: 102.700 Average Row 5 Roughness: 98.400 Average Row 6 Roughness: 99.600 Average Row 7 Roughness: 97.900 Average Row 8 Roughness: 99.600 Average Row 9 Roughness: 102.150 Average Row 10 Roughness: 131.150
P-092	126	95	100	99	105	94	93	96	95	95	288	
P-093	120	136	88	102	112	86	100	91	103	95	288	
P-094	100	109	95	93	99	86	105	99	97	97	288	
P-095	93	114	118	88	103	91	109	98	93	98	288	
P-096	103	137	116	124	120	84	103	93	98	95	288	
P-097	95	110	110	93	102	95	78	104	108	96	288	
P-098	116	105	90	109	105	95	99	101	120	104	288	
P-099	94	154	94	97	110	111	108	117	93	107	288	
P-100	105	113	118	118	114	87	121	174	132	129	288	

Table 6. Gritblast Cycle Operating Parameters - Aft Dome

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
1	05/05/92	15:12:51	1.05	1.46	10	81.8
2	05/05/92	15:12:56	1.03	1.5	10.1	81.8
3	05/05/92	15:13:01	1.01	1.51	10.2	81.8
4	05/05/92	15:13:06	1	1.51	10.3	81.8
5	05/05/92	15:13:11	1.02	1.52	10.5	81.7
6	05/05/92	15:13:16	1.03	1.52	10.6	80
7	05/05/92	15:13:21	1.04	1.52	10.7	81.8
8	05/05/92	15:13:26	1.03	1.52	10.9	81.8
9	05/05/92	15:13:31	1.03	1.52	11	81.8
10	05/05/92	15:13:36	1.02	1.52	11.1	81.8
11	05/05/92	15:13:41	1.02	1.51	11.2	81.7
12	05/05/92	15:13:46	1.03	1.51	11.3	81.8
13	05/05/92	15:13:51	1.02	1.5	11.5	81.8
14	05/05/92	15:13:56	1.02	1.49	11.6	81.8
15	05/05/92	15:14:01	1.02	1.49	11.7	81.8
16	05/05/92	15:14:06	1.03	1.48	11.8	81.8
17	05/05/92	15:14:11	1.03	1.47	12	81.8
18	05/05/92	15:14:16	1.02	1.47	12.1	81.8
19	05/05/92	15:14:21	1.02	1.47	12.2	81.8
20	05/05/92	15:14:26	1.05	1.47	12.3	81.8
21	05/05/92	15:14:31	1.03	1.47	12.4	81.8
22	05/05/92	15:14:36	1	1.47	12.6	81.8
23	05/05/92	15:14:41	0.99	1.47	12.7	81.7
24	05/05/92	15:14:46	0.99	1.47	12.8	81.8
25	05/05/92	15:14:51	1.02	1.47	13	81.8
26	05/05/92	15:14:56	1.03	1.47	13.1	81.8
27	05/05/92	15:15:01	1.03	1.47	13.2	81.8
28	05/05/92	15:15:06	1.02	1.47	13.3	81.8
29	05/05/92	15:15:11	1.02	1.47	13.4	81.8
30	05/05/92	15:15:16	1.01	1.47	13.6	81.8
31	05/05/92	15:15:21	1	1.47	13.7	81.8
32	05/05/92	15:15:26	1.01	1.48	13.8	81.8
33	05/05/92	15:15:31	1.01	1.48	14	81.8
34	05/05/92	15:15:36	1.01	1.49	14.1	81.7
35	05/05/92	15:15:41	1.01	1.5	14.2	81.8
36	05/05/92	15:15:46	1.01	1.5	14.4	81.9
37	05/05/92	15:15:51	1.01	1.5	14.4	81.8
38	05/05/92	15:15:56	1.01	1.51	14.6	81.9
39	05/05/92	15:16:01	1.01	1.52	14.7	81.9
40	05/05/92	15:16:06	1.02	1.52	14.8	81.8
41	05/05/92	15:16:11	1.01	1.51	14.9	81.8

Table 6. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
42	05/05/92	15:16:16	1	1.5	15.1	81.9
43	05/05/92	15:16:21	1	1.51	15.2	81.9
44	05/05/92	15:16:26	1	1.52	15.4	81.9
45	05/05/92	15:16:31	1.01	1.52	15.5	81.8
46	05/05/92	15:16:36	1.02	1.52	15.6	81.7
47	05/05/92	15:16:41	1.01	1.51	15.8	82.6
48	05/05/92	15:16:46	1.01	1.51	15.8	81.7
49	05/05/92	15:16:51	1.01	1.52	16	81.7
50	05/05/92	15:16:56	1	1.52	16.1	81.8
51	05/05/92	15:17:01	0.99	1.52	16.2	81.8
52	05/05/92	15:17:06	0.99	1.52	16.4	81.7
53	05/05/92	15:17:11	1.01	1.52	16.5	81.8
54	05/05/92	15:17:16	1.01	1.52	16.6	81.7
55	05/05/92	15:17:21	1.01	1.52	16.8	81.7
56	05/05/92	15:17:26	1.01	1.52	16.9	81.7
57	05/05/92	15:17:31	1.01	1.52	17	81.7
58	05/05/92	15:17:36	1	1.52	17.1	81.6
59	05/05/92	15:17:41	0.99	1.52	17.3	81.7
60	05/05/92	15:17:46	0.99	1.52	17.4	81.7
61	05/05/92	15:17:51	1	1.52	17.5	81.7
62	05/05/92	15:17:56	1	1.52	17.7	81.6
63	05/05/92	15:18:01	1.01	1.52	17.8	81.7
64	05/05/92	15:18:06	1	1.52	17.9	81.7
65	05/05/92	15:18:11	1	1.52	18	81.7
66	05/05/92	15:18:16	0.99	1.52	18.2	81.7
67	05/05/92	15:18:21	0.99	1.52	18.3	81.8
68	05/05/92	15:18:26	0.99	1.52	18.4	81.7
69	05/05/92	15:18:31	0.99	1.52	18.5	81.8
70	05/05/92	15:18:36	1	1.52	18.7	81.8
71	05/05/92	15:18:41	1	1.52	18.8	81.7
72	05/05/92	15:18:46	1	1.51	18.9	81.7
73	05/05/92	15:18:51	1	1.51	19	81.7
74	05/05/92	15:18:56	1	1.51	19.2	81.8
75	05/05/92	15:19:01	0.99	1.51	19.3	81.7
76	05/05/92	15:19:06	1	1.51	19.4	81.7
77	05/05/92	15:19:11	1	1.51	19.5	81.8
78	05/05/92	15:19:16	0.99	1.51	19.6	81.8
79	05/05/92	15:19:21	0.99	1.5	19.8	81.7
80	05/05/92	15:19:25	0.99	1.49	19.9	81.8
81	05/05/92	15:19:31	0.98	1.5	20	81.7
82	05/05/92	15:19:36	1	1.5	20.2	81.8

Table 6. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
83	05/05/92	15:19:41	1	1.5	20.3	81.8
84	05/05/92	15:19:46	1	1.5	20.4	81.7
85	05/05/92	15:19:50	1	1.49	20.5	81.7
86	05/05/92	15:19:56	0.99	1.49	20.7	81.7
87	05/05/92	15:20:01		1.5	20.8	79.3
88	05/05/92	15:20:06	0.98	1.5	20.9	81.6
89	05/05/92	15:20:11	0.99	1.5	21	81.7
90	05/05/92	15:20:16	0.99	1.5	21.1	81.7
91	05/05/92	15:20:20	1	1.51	21.3	81.6
92	05/05/92	15:20:26	1	1.51	21.4	81.7
93	05/05/92	15:20:31	0.99	1.51	21.5	81.7
94	05/05/92	15:20:36	0.99	1.51	21.7	81.8
95	05/05/92	15:20:41	0.99	1.51	21.8	81.8
96	05/05/92	15:20:45	0.99	1.52	21.9	81.7
97	05/05/92	15:20:51	0.99	1.52	22.1	81.7
98	05/05/92	15:20:56	0.99	1.52	22.2	81.7
99	05/05/92	15:21:01	0.99	1.52	22.3	81.7
100	05/05/92	15:21:06	0.99	1.52	22.4	81.7
101	05/05/92	15:21:10	0.99	1.52	22.6	81.7
102	05/05/92	15:21:16	0.98	1.52	22.7	81.7
103	05/05/92	15:21:21	1	1.53	22.8	81.7
104	05/05/92	15:21:25	0.99	1.54	23	81.7
105	05/05/92	15:21:31	0.99	1.54	23.1	81.7
106	05/05/92	15:21:36	1	1.55	23.3	81.7
107	05/05/92	15:21:41	0.99	1.57	23.4	81.8
108	05/05/92	15:21:46	0.99	1.57	23.5	81.7
109	05/05/92	15:21:50	0.99	1.57	23.6	81.6
110	05/05/92	15:21:56	0.99	1.56	23.8	81.6
111	05/05/92	15:22:01	0.99	1.56	23.9	81.6
112	05/05/92	15:22:06	0.99	1.56	24	81.6
113	05/05/92	15:22:11	0.99	1.56	24.1	81.6
114	05/05/92	15:22:16	0.99	1.56	24.3	81.6
115	05/05/92	15:22:21	0.99	1.56	24.4	81.6
116	05/05/92	15:22:25	0.99	1.56	24.5	81.6
117	05/05/92	15:22:31	0.99	1.55	24.7	81.7
118	05/05/92	15:22:36	0.99	1.55	24.8	81.7
119	05/05/92	15:22:41	0.99	1.55	24.9	81.7
120	05/05/92	15:22:46	0.99	1.55	25	81.7
121	05/05/92	15:22:50	0.99	1.55	25.1	81.8
122	05/05/92	15:22:55	0.98	1.55	25.3	81.7
123	05/05/92	15:23:01	0.99	1.55	25.4	81.7

Table 6. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
124	05/05/92	15:23:06	0.99	1.55	25.5	81.7
125	05/05/92	15:23:11	1	1.54	25.7	81.7
126	05/05/92	15:23:16	1	1.53	25.8	81.6
127	05/05/92	15:23:21	0.99	1.53	25.9	81.7
128	05/05/92	15:23:25	0.99	1.52	26	80.9
129	05/05/92	15:23:31	0.98	1.51	26.2	81.7
130	05/05/92	15:23:36	0.98	1.51	26.3	81.7
131	05/05/92	15:23:41	0.99	1.5	26.4	81.6
132	05/05/92	15:23:46	0.99	1.5	26.5	81.7
133	05/05/92	15:23:50	1	1.51	26.6	81.7
134	05/05/92	15:23:56	1	1.51	26.7	81.7
135	05/05/92	15:24:01	1	1.51	26.9	81.6
136	05/05/92	15:24:06	0.99	1.52	27	81.7
137	05/05/92	15:24:11	0.98	1.52	27.2	81.7
138	05/05/92	15:24:16	0.99	1.52	27.3	81.7
139	05/05/92	15:24:20	0.98	1.52	27.4	81.7
140	05/05/92	15:24:25	0.99	1.52	27.6	81.7
141	05/05/92	15:24:31	1	1.52	27.7	81.7
142	05/05/92	15:24:36	1	1.52	27.8	81.7
143	05/05/92	15:24:41	0.99	1.52	28	81.7
144	05/05/92	15:24:45	1	1.52	28.1	81.7
145	05/05/92	15:24:51	1	1.52	28.2	81.7
146	05/05/92	15:24:56	0.99	1.52	28.3	81.7
147	05/05/92	15:25:01	1	1.54	28.5	81.7
148	05/05/92	15:25:06	1	1.56	28.6	81.7
149	05/05/92	15:25:10	0.99	1.57	28.8	81.7
150	05/05/92	15:25:16	0.99	1.59	28.9	81.7
151	05/05/92	15:25:20	0.99	1.6	29	81.8
152	05/05/92	15:25:25	0.99	1.6	29.2	81.7
153	05/05/92	15:25:31	0.99	1.6	29.3	81.7
154	05/05/92	15:25:36	0.99	1.6	29.5	81.7
155	05/05/92	15:25:41	0.99	1.62	29.6	81.7
156	05/05/92	15:25:45	1	1.63	29.7	81.8
157	05/05/92	15:25:50	1	1.63	29.8	81.7
158	05/05/92	15:25:56	0.99	1.63	30	81.7
159	05/05/92	15:26:01	0.99	1.63	30.1	81.7
160	05/05/92	15:26:06	0.99	1.62	30.2	81.7
161	05/05/92	15:26:10	0.99	1.6	30.4	81.7
162	05/05/92	15:26:16	1	1.59	30.5	81.7
163	05/05/92	15:26:20	1.01	1.57	30.6	81.7
164	05/05/92	15:26:25	1	1.56	30.8	81.7

Table 6. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
165	05/05/92	15:26:30	1	1.56	30.9	81.7
166	05/05/92	15:26:36	0.99	1.56	31	81.6
167	05/05/92	15:26:41	0.99	1.56	31.2	81.7
168	05/05/92	15:26:45	0.99	1.56	31.3	81.7
169	05/05/92	15:26:50	1.01	1.56	31.4	82.6
170	05/05/92	15:26:55	1.01	1.56	31.5	81.7
171	05/05/92	15:27:01	1	1.56	31.7	81.7
172	05/05/92	15:27:06	1	1.56	31.8	81.7
173	05/05/92	15:27:10	0.99	1.56	31.9	81.7
174	05/05/92	15:27:16	0.99	1.56	32.1	81.7
175	05/05/92	15:27:21	1	1.56	32.2	81.7
176	05/05/92	15:27:25	1.01	1.56	32.3	81.7
177	05/05/92	15:27:30	1	1.56	32.4	81.8
178	05/05/92	15:27:36	1	1.56	32.5	81.7
179	05/05/92	15:27:41	1	1.56	32.7	81.7
180	05/05/92	15:27:45	1	1.56	32.8	81.7
181	05/05/92	15:27:50	1	1.56	33	81.7
182	05/05/92	15:27:56	1	1.56	33.1	81.7
183	05/05/92	15:28:01	1	1.56	33.2	81.7
184	05/05/92	15:28:06	1.01	1.56	33.4	81.7
185	05/05/92	15:28:10	1.01	1.56	33.5	81.7
186	05/05/92	15:28:16	1.02	1.56	33.6	81.7
187	05/05/92	15:28:20	1	1.56	33.8	81.8
188	05/05/92	15:28:25	1	1.56	33.9	81.7
189	05/05/92	15:28:30	1.01	1.57	34	81.8
190	05/05/92	15:28:36	1.01	1.59	34.2	81.7
191	05/05/92	15:28:41	1	1.6	34.3	81.8
192	05/05/92	15:28:45	1	1.6	34.4	81.7
193	05/05/92	15:28:50	1.01	1.6	34.6	81.7
194	05/05/92	15:28:55	1	1.6	34.7	81.8
195	05/05/92	15:29:01	1.01	1.6	34.9	81.6
196	05/05/92	15:29:06	1.02	1.6	35	81.7
197	05/05/92	15:29:10	1.01	1.62	35.1	81.7
198	05/05/92	15:29:16	1.01	1.63	35.3	81.7
199	05/05/92	15:29:20	1.01	1.63	35.4	81.7
200	05/05/92	15:29:25	1.02	1.63	35.5	81.7
201	05/05/92	15:29:31	1.01	1.63	35.7	81.7
202	05/05/92	15:29:36	1.01	1.63	35.8	81.7
203	05/05/92	15:29:41	1.01	1.63	35.9	81.7
204	05/05/92	15:29:45	1.01	1.63	36.1	81.8
205	05/05/92	15:29:50	1.02	1.63	36.2	81.7

Table 6. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
206	05/05/92	15:29:56	1.01	1.63	36.4	81.8
207	05/05/92	15:30:01	1.01	1.63	36.5	81.7
208	05/05/92	15:30:06	1.02	1.63	36.6	81.7
209	05/05/92	15:30:10	1.03	1.63	36.8	79.7
210	05/05/92	15:30:15	1.02	1.63	36.9	81.7
211	05/05/92	15:30:20	1.02	1.63	37	81.8
212	05/05/92	15:30:25	1.01	1.63	37.1	81.7
213	05/05/92	15:30:31	1.02	1.63	37.3	81.7
214	05/05/92	15:30:36	1.02	1.63	37.4	81.7
215	05/05/92	15:30:40	1.02	1.63	37.5	81.7
216	05/05/92	15:30:45	1.03	1.63	37.7	81.7
217	05/05/92	15:30:50	1.02	1.63	37.8	81.7
218	05/05/92	15:30:56	1.02	1.63	38	81.7
219	05/05/92	15:31:01	1.02	1.62	38.1	81.7
220	05/05/92	15:31:05	1.02	1.61	38.2	81.7
221	05/05/92	15:31:10	1.02	1.61	38.3	81.7
222	05/05/92	15:31:16	1.03	1.61	38.5	81.7
223	05/05/92	15:31:20	1.04	1.61	38.6	81.7
224	05/05/92	15:31:25	1.04	1.61	38.7	81.7
225	05/05/92	15:31:30	1.02	1.61	38.9	81.6
226	05/05/92	15:31:35	1.02	1.61	39	81.7
227	05/05/92	15:31:40	1.01	1.61	39.1	81.7
228	05/05/92	15:31:45	1.02	1.61	39.3	81.7
229	05/05/92	15:31:50	1.04	1.61	39.4	81.7
230	05/05/92	15:31:55	1.04	1.61	39.6	81.7
231	05/05/92	15:32:00	1.04	1.61	39.7	81.7
232	05/05/92	15:32:06	1.03	1.61	39.9	81.7
233	05/05/92	15:32:10	1.03	1.61	40	81.7
234	05/05/92	15:32:16	1.03	1.61	40.1	81.8
235	05/05/92	15:32:21	1.04	1.61	40.2	81.8
236	05/05/92	15:32:25	1.04	1.61	40.4	81.7
237	05/05/92	15:32:30	1.04	1.61	40.5	81.7
238	05/05/92	15:32:35	1.03	1.61	40.7	81.7
239	05/05/92	15:32:41	1.03	1.62	40.8	81.7
240	05/05/92	15:32:46	1.04	1.64	41	81.7
241	05/05/92	15:32:50	1.04	1.66	41.1	81.7
242	05/05/92	15:32:55	1.04	1.68	41.2	81.7
243	05/05/92	15:33:00	1.04	1.69	41.4	81.7
244	05/05/92	15:33:06	1.04	1.69	41.5	81.7
245	05/05/92	15:33:10	1.04	1.69	41.7	81.7
246	05/05/92	15:33:16	1.04	1.69	41.9	81.7

Table 6. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
247	05/05/92	15:33:21	1.04	1.71	42	81.7
248	05/05/92	15:33:25	1.05	1.73	42.2	81.7
249	05/05/92	15:33:30	1.05	1.73	42.3	81.7
250	05/05/92	15:33:35	1.05	1.73	42.5	82.7
251	05/05/92	15:33:41	1.04	1.73	42.6	81.7
252	05/05/92	15:33:46	1.04	1.72	42.7	81.8
253	05/05/92	15:33:50	1.05	1.72	42.9	81.7
254	05/05/92	15:33:55	1.06	1.72	43	81.7
255	05/05/92	15:34:00	1.06	1.72	43.1	81.7
256	05/05/92	15:34:06	1.05	1.72	43.3	81.7
257	05/05/92	15:34:11	1.06	1.72	43.4	81.7
258	05/05/92	15:34:16	1.05	1.7	43.5	81.7
259	05/05/92	15:34:21	1.06	1.68	43.7	81.7
260	05/05/92	15:34:25	1.06	1.68	43.8	81.7
261	05/05/92	15:34:30	1.07	1.68	44	81.7
262	05/05/92	15:34:35	1.06	1.67	44.1	81.7
263	05/05/92	15:34:41	1.06	1.65	44.2	81.7
264	05/05/92	15:34:46	1.06	1.64	44.4	81.7
265	05/05/92	15:34:50	1.06	1.64	44.5	81.7
266	05/05/92	15:34:55	1.07	1.64	44.6	81.8
267	05/05/92	15:35:00	1.07	1.64	44.8	81.7
268	05/05/92	15:35:06	1.07	1.64	44.9	81.7
269	05/05/92	15:35:11	1.07	1.64	45.1	81.7
270	05/05/92	15:35:16	1.07	1.65	45.2	81.7
271	05/05/92	15:35:20	1.06	1.65	45.3	81.7
272	05/05/92	15:35:25	1.07	1.65	45.5	81.7
273	05/05/92	15:35:30	1.07	1.67	45.7	81.7
274	05/05/92	15:35:35	1.08	1.69	45.8	81.7
275	05/05/92	15:35:40	1.07	1.69	46	81.7
276	05/05/92	15:35:45	1.07	1.69	46.1	81.7
277	05/05/92	15:35:50	1.08	1.69	46.2	81.6
278	05/05/92	15:35:55	1.08	1.69	46.4	81.7
279	05/05/92	15:36:00	1.08	1.7	46.5	81.7
280	05/05/92	15:36:05	1.08	1.72	46.7	81.7
281	05/05/92	15:36:10	1.08	1.73	46.8	81.7
282	05/05/92	15:36:15	1.08	1.73	47	81.7
283	05/05/92	15:36:20	1.08	1.74	47.1	81.7
284	05/05/92	15:36:25	1.08	1.76	47.3	81.7
285	05/05/92	15:36:30	1.09	1.77	47.4	81.6
286	05/05/92	15:36:35	1.09	1.77	47.6	81.7
287	05/05/92	15:36:40	1.09	1.77	47.7	81.7

Table 6. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
288	05/05/92	15:36:45	1.1	1.77	47.9	81.7
289	05/05/92	15:36:50	1.1	1.77	48	81.7
290	05/05/92	15:36:55	1.09	1.77	48.2	81.8
291	05/05/92	15:37:00	1.09	1.77	48.3	82.5
292	05/05/92	15:37:05	1.08	1.77	48.5	81.7
293	05/05/92	15:37:10	1.09	1.77	48.6	81.7
294	05/05/92	15:37:15	1.11	1.77	48.8	81.7
295	05/05/92	15:37:20	1.11	1.77	48.9	81.7
296	05/05/92	15:37:25	1.11	1.77	49.1	81.6
297	05/05/92	15:37:30	1.11	1.77	49.2	81.7
298	05/05/92	15:37:35	1.1	1.77	49.4	81.7
299	05/05/92	15:37:40	1.09	1.77	49.5	81.6
300	05/05/92	15:37:45	1.1	1.76	49.7	81.7
301	05/05/92	15:37:50	1.1	1.74	49.8	81.6
302	05/05/92	15:37:55	1.1	1.74	49.9	81.6
303	05/05/92	15:38:00	1.11	1.73	50	81.7
304	05/05/92	15:38:05	1.12	1.72	50.2	81.7
305	05/05/92	15:38:10	1.11	1.71	50.3	81.6
306	05/05/92	15:38:15	1.09	1.71	50.5	81.6
307	05/05/92	15:38:20	1.12	1.71	50.6	81.7
308	05/05/92	15:38:25	1.13	1.71	50.8	81.7
309	05/05/92	15:38:30	1.13	1.71	50.9	81.6
310	05/05/92	15:38:35	1.12	1.71	51.1	81.5
311	05/05/92	15:38:40	1.13	1.71	51.2	81.6
312	05/05/92	15:38:45	1.12	1.71	51.4	81.6
313	05/05/92	15:38:50	1.12	1.71	51.5	81.6
314	05/05/92	15:38:55	1.12	1.72	51.7	81.6
315	05/05/92	15:39:00	1.13	1.74	51.9	81.5
316	05/05/92	15:39:05	1.13	1.74	51.9	81.7
317	05/05/92	15:39:10	1.13	1.74	52.1	81.6
318	05/05/92	15:39:15	1.13	1.76	52.3	81.7
319	05/05/92	15:39:20	1.14	1.77	52.4	81.6
320	05/05/92	15:39:25	1.14	1.77	52.6	81.6
321	05/05/92	15:39:30	1.14	1.77	52.7	81.7
322	05/05/92	15:39:35	1.14	1.77	52.9	81.7
323	05/05/92	15:39:40	1.14	1.78	53.1	81.7
324	05/05/92	15:39:45	1.13	1.8	53.3	81.6
325	05/05/92	15:39:50	1.14	1.88	53.5	81.6
326	05/05/92	15:39:55	1.15	1.91	53.6	81.7
327	05/05/92	15:40:00	1.15	1.93	53.8	81.6
328	05/05/92	15:40:05	1.15	1.93	53.9	81.6

Table 6. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
329	05/05/92	15:40:10	1.15	1.91	54	81.6
330	05/05/92	15:40:15	1.15	1.89	54.2	81.6
331	05/05/92	15:40:20	1.13	1.89	54.3	79.7
332	05/05/92	15:40:25	1.15	1.88	54.5	81.6
333	05/05/92	15:40:30	1.16	1.88	54.7	81.7
334	05/05/92	15:40:35	1.17	1.87	54.8	81.6
335	05/05/92	15:40:40	1.16	1.87	55	81.6
336	05/05/92	15:40:45	1.16	1.86	55.1	81.7
337	05/05/92	15:40:50	1.16	1.86	55.2	81.6
338	05/05/92	15:40:55	1.17	1.86	55.4	81.6
339	05/05/92	15:41:00	1.17	1.86	55.6	81.6
340	05/05/92	15:41:05	1.17	1.85	55.7	81.5
341	05/05/92	15:41:10	1.18	1.83	55.9	81.6
342	05/05/92	15:41:15	1.18	1.82	56	81.6
343	05/05/92	15:41:20	1.16	1.81	56.1	81.7
344	05/05/92	15:41:25	1.17	1.8	56.3	81.6
345	05/05/92	15:41:30	1.18	1.77	56.4	81.7
346	05/05/92	15:41:35	1.2	1.75	56.6	81.6
347	05/05/92	15:41:40	1.18	1.76	56.7	81.6
348	05/05/92	15:41:45	1.18	1.77	56.9	81.6
349	05/05/92	15:41:50	1.18	1.77	57	81.6
350	05/05/92	15:41:55	1.18	1.78	57.2	81.6
351	05/05/92	15:42:00	1.19	1.8	57.3	81.6
352	05/05/92	15:42:05	1.19	1.82	57.5	81.6
353	05/05/92	15:42:10	1.19	1.84	57.7	81.6
354	05/05/92	15:42:15	1.2	1.85	57.8	81.7
355	05/05/92	15:42:20	1.2	1.85	58	81.6
356	05/05/92	15:42:25	1.21	1.85	58.2	81.7
357	05/05/92	15:42:30	1.2	1.85	58.3	81.6
358	05/05/92	15:42:35	1.19	1.86	58.5	81.6
359	05/05/92	15:42:40	1.2	1.87	58.7	81.6
360	05/05/92	15:42:45	1.21	1.88	58.8	81.6
361	05/05/92	15:42:50	1.22	1.9	59	81.6
362	05/05/92	15:42:55	1.19	1.91	59.1	81.7
363	05/05/92	15:43:00	1.21	1.91	59.3	81.6
364	05/05/92	15:43:05	1.22	1.91	59.4	81.6
365	05/05/92	15:43:10	1.22	1.91	59.6	81.6
366	05/05/92	15:43:15	1.22	1.92	59.8	81.6
367	05/05/92	15:43:20	1.22	1.94	60	81.6
368	05/05/92	15:43:25	1.23	1.94	60.1	81.6
369	05/05/92	15:43:30	1.24	1.94	60.3	81.6

Table 6. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
370	05/05/92	15:43:35	1.24	1.94	60.5	81.6
371	05/05/92	15:43:40	1.24	1.94	60.6	77.1
372	05/05/92	15:43:45	1.23	1.94	60.8	82.2
373	05/05/92	15:43:50	1.22	1.94	60.9	82.3
374	05/05/92	15:43:55	1.23	1.95	61.1	82.3
375	05/05/92	15:44:00	1.24	1.96	61.3	81.6
376	05/05/92	15:44:05	1.25	1.96	61.5	81.7
377	05/05/92	15:44:10	1.26	1.97	61.6	81.6
378	05/05/92	15:44:15	1.25	1.99	61.8	81.7
379	05/05/92	15:44:20	1.25	2	62	81.6
380	05/05/92	15:44:25	1.24	2	62.1	81.6
381	05/05/92	15:44:30	1.25	1.99	62.3	81.7
382	05/05/92	15:44:35	1.24	1.99	62.5	81.6
383	05/05/92	15:44:40	1.26	1.99	62.7	81.5
384	05/05/92	15:44:45	1.27	1.99	62.8	81.7
385	05/05/92	15:44:50	1.28	1.99	62.9	81.5
386	05/05/92	15:44:55	1.27	1.97	63.1	81.6
387	05/05/92	15:45:00	1.27	1.97	63.3	81.6
388	05/05/92	15:45:05	1.27	1.97	63.4	81.6
389	05/05/92	15:45:10	1.26	1.97	63.6	81.6
390	05/05/92	15:45:15	1.27	1.97	63.8	81.6
391	05/05/92	15:45:20	1.26	1.97	63.9	81.6
392	05/05/92	15:45:25	1.29	1.97	64.1	81.6
393	05/05/92	15:45:30	1.3	1.97	64.3	81.6
394	05/05/92	15:45:35	1.3	1.96	64.4	81.7
395	05/05/92	15:45:40	1.3	1.95	64.5	81.5
396	05/05/92	15:45:45	1.29	1.95	64.7	81.6
397	05/05/92	15:45:50	1.28	1.95	64.9	81.6
398	05/05/92	15:45:55	1.27	1.95	65.1	81.7
399	05/05/92	15:46:00	1.29	1.96	65.2	81.6
400	05/05/92	15:46:05	1.31	1.96	65.4	81.6
401	05/05/92	15:46:10	1.32	1.96	65.6	81.6
402	05/05/92	15:46:15	1.31	1.96	65.7	81.6
403	05/05/92	15:46:20	1.31	1.97	65.9	81.7
404	05/05/92	15:46:25	1.31	1.98	66.1	81.6
405	05/05/92	15:46:30	1.3	1.99	66.2	81.7
406	05/05/92	15:46:35	1.31	2.01	66.4	81.6
407	05/05/92	15:46:40	1.32	2.02	66.6	81.6
408	05/05/92	15:46:45	1.32	2.02	66.8	81.5
409	05/05/92	15:46:50	1.33	2.02	66.9	81.6
410	05/05/92	15:46:55	1.32	2.02	67.1	81.6

Table 6. Cont'd

SAMPLE	DATE	TIME	TABLE SPEED (RPM)	NOZZLE SPEED (IN/MIN)	NOZZLE POSITION (INCHES)	BLAST PRESSURE (PSI)
411	05/05/92	15:47:00	1.34	2.03	67.3	81.7
412	05/05/92	15:47:05	1.33	2.03	67.5	79.2
413	05/05/92	15:47:10	1.33	2.04	67.7	81.6
414	05/05/92	15:47:15	1.33	2.06	67.9	81.7
415	05/05/92	15:47:20	1.33	2.07	68	81.7
416	05/05/92	15:47:25	1.35	2.09	68.2	81.6
417	05/05/92	15:47:30	1.35	2.11	68.4	81.6
418	05/05/92	15:48:31	1.38	2.07	70.5	81.7
419	05/05/92	15:48:36	1.38	2.07	70.7	81.6
420	05/05/92	15:48:41	1.4	2.07	70.8	81.6
421	05/05/92	15:48:46	1.39	2.08	71	81.7
422	05/05/92	15:48:51	1.39	2.08	71.1	81.7
423	05/05/92	15:48:56	1.39	2.1	71.3	81.6
424	05/05/92	15:49:01	1.4	2.1	71.5	81.6
425	05/05/92	15:49:06	1.42	2.1	71.7	81.7
426	05/05/92	15:49:11	1.41	2.1	71.9	81.6
427	05/05/92	15:49:16	1.41	2.1	72.1	81.7
428	05/05/92	15:49:21	1.4	2.11	72.3	81.6
429	05/05/92	15:49:26	1.41	2.12	72.5	81.7
430	05/05/92	15:49:31	1.42	2.14	72.6	81.6
431	05/05/92	15:49:36	1.42	2.15	72.8	81.6
432	05/05/92	15:49:41	1.43	2.17	73	81.6
433	05/05/92	15:49:46	1.44	2.19	73.2	81.7
434	05/05/92	15:49:51	1.44	2.21	73.4	81.6
435	05/05/92	15:49:56	1.44	2.22	73.6	81.6
436	05/05/92	15:50:01	1.44	2.23	73.8	81.6